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ORIGINAL ARTICLES.

TYPHOID FEVER.

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In the neighborhood or territory where I practice medicine we have more or less typhoid fever every Summer and Fall. Last year, during the Summer and Fall months, I had to contend with a local epidemic of the disease, consisting of twenty-eight cases. I have selected typhoid fever, not so much with a view of producing anything original on the subject, but for the purpose of introducing the disease to elicit a discussion of the subject, and thereby gain further light upon the malady under consideration.

There is no disease that affects the human body that is of greater importance to the medical profession than this fever. It is a disease that most commonly occurs between the ages of 15 and 30 years; that is, it is an affection of youth and early adult life, though it may, and does, occur in any period of life; in the small infant at the breast of its mother, and in the old person who has passed the age of three-score and ten; but, according to my experience and observation, it occurs very seldom in children under the age of 4 or 5 years, and I do not remember of ever treating but one case of typhoid fever in a person 60 years of age. Indeed, I consider that the age of 50 years, to a certain extent, renders a person exempt from the poison of typhoid fever. Whether it is from physiological or anatomical changes in the glands of the small intestines, or from a previous attack of the disease, I do not know, but my observation is that it is very rare to see the disease in a person who has passed the age above named.

Typhoid fever is a specific, infectious disease, caused by a specific germ, or typhoid bacillus, that is carried into the system commonly with water drank that is contaminated with the poison. There are other means of conveying the germ into the body, such as milk charged with the virus, and perhaps breathing the atmosphere reeking with the poison emanating from the discharges of the patient; but, in my opinion, water is the vehicle employed in a great majority of cases for conveying the germ into the alimentary canal, from the simple fact that, in impure wells and springs, the poison is engendered or originated, and, finding its way into the *prima viae*,

comes in contact with the glands of the small intestines, especially the glands of Peyer, Brunner, and other glands in the neighborhood of the ileo-cæcal valve, where it finds a congenial home and location, producing in the anatomical structure hyperplasia, sloughing, ulceration, and other lesions characteristic of typhoid fever. In some severe cases the ulceration may extend to the jejunum, duodenum, and stomach, and in fact may not only affect any portion of the digestive tract but may affect other important organs and glands of the body.

The diagnosis of typhoid fever is a little difficult in a great many cases, especially in the early period of the disease where the symptoms are not very prominent and well developed. It comes on gradually and in an insidious manner in the majority of cases. There is a disinclination to business, or want of fixedness of purpose, with general malaise. The patient has a severe headache, loss of appetite, almost invariably constipated bowels, though sometimes there is diarrhœa, pain in the small of the back, urine scanty and red or lye-colored; the tongue may have a heavy, whitish or brown coat, or it may be rather clean or very slightly coated. There may be epistaxis, or bleeding of the nose, or there may not be. In some cases we have sick stomach and vomiting; in most cases there is a rose rash or an eruption on the breast and other portions of the body, which usually makes its appearance from the fifth to the tenth day; pain in the bowels, especially upon pressure over the right iliac fossa; pressure over the ileo-cæcal valve will also reveal a gurgling sound, caused by the gas and other contents of the bowels being moved. The patient is thirsty, and has a fever; evening temperature higher than in the morning; the circulation is accelerated and very often dicrotic. In a great many instances this prodromal stage has been going on several days before the physician is called to see the case, so that the second week is on hand, when all the symptoms are increased in violence; the fever ranging from a little above normal to 102° to 103°, or more in the morning, according to the severity of the case, and one, two, or three degrees higher still in the afternoon. I have seen one or two cases where the morning temperature was the highest. Hemorrhage from the bowels is liable to occur in this stage, by a blood vessel being broken either by distention, sloughing and ulceration, or by violent peristaltic action of the bowels. It occurred in ten of my twenty-eight cases. Of the twenty-eight cases four died. Hemorrhage occurred in all four of the fatal cases.

Tympany is present in a great many cases, caused from an accumulation of gas in the bowels, sometimes filling and strutting them until it is an alarming symptom. Often the tympany is slight, and in some cases it is entirely absent throughout the course of the disease. Perforation of the bowels is liable to occur from the sloughing and ulceration, or from other causes, and death from peritonitis is the result. Delirium is very often present, especially at night; in some cases violent, wild, and maniacal in character, and at other times mild, low, and muttering. The patient is very nervous, picks at the bed-clothes, there is subsultus-tendinum; the patient talks in a discontented way, asks to be carried home or allowed to go home.

The circulation in this disease presents some peculiarities, at least to me. For instance, in one of my twenty-eight cases the temperature in the evening was 104½°, pulse 105; next morning the temperature was 102°, the circulation still 105. In another case the temperature in the morning was 101½° and the circulation 120; evening fever temperature was 103°, and pulse 120, and remained about in that way throughout the disease. Now, what I mean to say is this: that the temperature may vary as to morning and evening, but the pulse-rate does not, according to my observation, unless there is some very material change in the individual's condition, such as serious complications or approaching dissolution. This pulse-rate shows that the circulation is not in keeping with the temperature. Antipyretics, internal and external, will reduce the temperature and change the quality of the pulse, but will not affect the pulse-rate. Whether this difference in the circulation is due to the individual temperament of the patient or to the toxic or typhoid poison affecting the

ganglionic system of nerves that preside over the heart and circulation, I do not know; but it is a clinical fact, and can be demonstrated in any epidemic of typhoid fever.

By the circulation better than any one symptom, can we judge whether we have a mild case or a desperate one. A fast pulse does not necessarily indicate an extremely high temperature, but does show an extensive ulceration going on in the intestines, and also indicates a very doubtful prognosis.

In beginning the treatment of typhoid fever, we must remember that this disease has a tendency to exhaustion and asthenia, and it is of great importance that we use all possible means of economizing the strength and vital forces of our patient from the start. It also requires an intelligent nurse to carry out the directions of the attending physician, one with judgment and discretion enough to know when and how to apply and give remedies during his absence. As soon as I know that I have a case of typhoid fever, I direct that the patient go to bed, and remain there perfectly quiet; not even allowing them to get up and attend to the calls of nature; but use the bed-pan when it is necessary to evacuate the bowels or bladder. A patient should not be permitted to lie in one position too long, but changed sufficiently often to secure against hypostasis, pneumonia, and congestions. When I first see the patient after the diagnosis is made, if the bowels have not moved, I give castor oil and turpentine, or produce one or two actions of the bowels with an enema. Usually the patient has been given pills or something to act on the stomach and bowels, by some member of the family before a doctor has been consulted. Then I give my patient eight or ten drops of turpentine in mucilage about four hours apart. If it produces strangury, which it will do in some cases, or offends the stomach, then I discontinue it. I know it is an old remedy, and has been in use for years, and I also know it is a germicide and a good one, and does not interterfere with treating symptoms which are rational and necessary. I have given carbolic acid and iodine, and like them very well in some cases. If the disease is caused by a germ, which I believe, why not disinfect the alimentary canal with turpentine, carbolic acid, or sulpho-carbolate of zinc?

The use of turpentine. where it agrees with the patient, comes nearer preventing the dormant condition of the secretions, which is shown in the dry lips, fauces, parched, dry, brown tongue, than any remedy that I ever used.

Some of my *confreres* claim that in calomel we have a splendid remedy, and that the disease can be aborted by its being given in the first stage. I have given calomel in typhoid fever a few times, but have not tested it enough to speak of its merits. If it does abort the disease, or benefit it greatly, as some claim, I think the praise should be given to the bichloride of mercury; for, before the calomel gets far into the small intestine, it is converted into corrosive sublimate by the acids and juices of the stomach and duodenum. Now, knowing that typhoid fever is the result of germ or microbe poison, which manifests itself in the glands, especially of the small intestines, it occurs to me that the bichloride of mercury would be a splendid remedy in this disease. As a germicide, it stands pre-eminently at the head of the list, and, given in fractional doses, by the discutient effects of the bichloride, the hyperplasia of the glands will be modified and relieved, and the secretions aroused from the dormant slumber that is so often found in typhoid fever. I have never used the bichloride of mercury in this disease, but intend to do so whenever an opportunity is offered.

To control the high fever, I use the sponge-bath, either warm or cold, whichever feels best to the patient; and by sponging and bathing, two, three, or four hours apart, as is indicated by the temperature, the fever may be reduced one or two degrees in this way by conduction and evaporation, bringing down the temperature until the patient is calm and serene. If the sponge-bathing does not have the desired effect, then I give some of the antipyretics, and prefer antifebrin, as I think it produces less depression than any other. Antipyretics should be very carefully watched, less they produce too much prostration and heart depression. If the bowels are

running off from a catarrhal irritation of the mucous membrane of the intestines, then I give turpentine and laudanum, which have always acted well in my hands, but, if the diarrhœa is caused by indigestion or improper feeding, then I correct the trouble by giving a diet that is easing on the digestion, and, if necessary, give lactopeptine and bismuth. When there is hemorrhage from the bowels, I give opium and acetate of lead in pills, and, when necessary repeat four or six hours apart. When a patient has had a hemorrhage, I make it a rule to constipate the bowels with opium, and keep them in that condition for several days, if the stomach and other circumstances will permit, for this reason: in the ulceration or broken vessels where the blood came from is a plug, or blood-clot adhering to it, and any moving of or peristalsis of the bowels is liable to dislodge and remove this blood plug, when perhaps a fatal hemorrhage will ensue. Hence the importance of keeping the patient perfectly quiet, and not allowing any nourishment except sweet milk and animal teas, that will be taken up by the stomach and duodenum, leaving as little as possible of effete material to go into the ulcerated bowels. I never give quinine in typhoid fever during the active and high temperature, but use it in the beginning of and during convalescence when necessary. In some cases there is retention of urine, and the catheter is required to empty the bladder. When there is tympany caused from an accumulation of gas in the bowels, turpentine stupes and warm poultices applied to the abdomen will comfort the patient some, and, an enemata of warm water, with a few drops of carbolic acid will cause an evacuation of the larger intestine, and thus relieve the tympany,

When, from hemorrhage or other cause, I do not want to move the bowels, then this accumulation of gas may be relieved by passing a tube or hollow bougie up the rectum. The tympany should not be allowed to go on unnoticed, for fear it distends the bowels too much, and cause perforation and peritonitis. When there is any evidence of heart failure, I give digitalis or alcohol. Alcohol I consider a splendid remedy in typhoid fever. It furnishes combustion for the system and prevents the waste of tissue, keeps up the hearts action, and stays asthenia.

In the last part of the first week and during the second, when the active fever is on, the patient with a wild, boisterous delirium, tossing from one side of the bed to the other, can be quieted and relieved by bathing the hands and arms, feet and legs, in warm water, with cold applications to the head, assisted, if necessary, by antipyretics and antispasmodics; while in the low, murmuring delirium, from exhaustion and waste, with a tremulous condition of the muscular system, tongue dry and shaky, edges red, with coma vigil, the patient requires a stimulating treatment, and then it is that whisky comes in as master of the situation, encourages the vital forces to action, and points to resolution and convalescence. Whiskey, combined with sweet milk, given to the patient will preserve the milk and allow the enfeebled stomach to perform digestion at leisure; when, many times, if the nourishment is given alone, the milk will, perhaps, ferment and act as a foreign substance, cause vomiting and other unpleasant symptoms.

I have never used cold-water treatment, and I do not think it could be carried out in private practice. I know there are a great many new remedies and plans of treating typhoid fever, and I am for advancement, but for advancement with discretion.

I consider that we have no specific treatment in this disease, so the treatment will continue to be discussed. Watch the patient closely, keep the fever within the bounds of reason, nourish, and sustain; and when we see the storm arising, whether in the bowels, lungs, or brain, exert our efforts in that direction, and in the great majority of cases we will succeed in landing our patient in a port of safety. The discharges of the patient should be immediately disinfected or burned. To burn them would be better.

There is another dangerous time in typhoid fever, and that is "after the ball is over, after the dawn of day"—after convalescence has been declared, the patient or nurse disregards the instructions of the physician, and is allowed to eat too much, taxes the

stomach above what it can bear, fills the intestines with fæces, or half assimilated material presses against the weakened places of recent ulceration, which are unable longer to hold intact, and perforation, peritonitis, and death are liable to occur. I remember, a few years ago, a case in a mulatto girl, who had for four or five days been without fever, ate a pickle, which set up a desperate peristalsis and griping of the bowels. The girl was wild with delirium, and died the second day. A post-mortem examination revealed perforation and peritonitis. So I am always very particular in instructing the patient and nurse of the danger in allowing too much nourishment, especially of any undesirable kind, until convalescence is far advanced.

DEEP HYPODERMIC INJECTION.

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Volumes have been written on hypodermatic medication, and a large number of remedies have been used hypodermically. No intelligent physician feels himself fully equipped for practice without his hypodermic syringe ever ready for use.

Although the instrument is so common and so much has been written on this method of medication, I find but little written regarding any but one method of using the instrument, that is, the one described by Dr. Ashhurst (*International Encyclopedia of Surgery*, Vol. 1, Page 524). He says:—"The operator pinches up a fold of integument between the thumb and first two fingers of his left hand, and, holding the charged syringe firmly in his right, quickly thrusts the point of the needle into the superficial fascia parallel with the fold. The needle should be carried fully two centimeters (three-fourths of an inch) into the tissue, and its point should be moved about to make sure that it is not in the deeper layers of the true skin. The contents of the syringe should be forced out slowly, after which the needle should be quickly removed, and the puncture closed by the pressure of the finger for a few seconds, to prevent the escape of any of the fluid and to arrest the slight bleeding which sometimes follows the operation."

Gross and others give similar descriptions as to the use of the instrument. The almost universal method seems to be to insert the medicine immediately under the skin into the superficial fascia.

In the REPORTER, Nov. 3, 1894, Dr. G. M. Hammond, of New York, recommends the deep injection of morphine for sciatica. In this article, he recommends depositing the medicine deep in the muscle, as the best method of injection. In a few cases like the above we find the term "deep hypodermic injection" used. Experience teaches me that this is the best method of using the instrument in all instances, for by carrying the needle well into the muscle we avoid many of the disagreeable consequences of the superficial method.

For many years I practiced the method as described by Ashhurst, and so long as I practiced that method I had trouble. To illustrate my experience with many cases: I was called to some nervous, fidgety woman. I found it necessary to give a hypodermic injection. I gave the injection in the usual manner. A swelling as large as half a hickory-nut arose where the medicine was deposited under the skin. The patient looked at her arm, and at once exclaimed, "Oh, look there Doctor! See what you have done. You have made my arm all swell up. You shall not stick that thing in my arm again. I know there is no need of it and now my arm will be just awful sore!" And, often, the arm would be very sore. I went back the next day to find a large blue spot, the size of a dollar, where the injection had been made, and there was soreness for several days. I have seen several such lumps in one patient at the same time. In fact I,

avoided the use of the hypodermic syringe where possible, on account of the disagreeable after effects! Again, when the solution is deposited too superficially, the slightest pressure will force out the medicine.

On account of the many bad results following the superficial method, I began to make deep injections. My needle measures one, to one and one-fourth inches. I select a point, usually the back of the arm, where there is no danger of veins or arteries, and pass the needle full length into the muscle. When I withdraw the needle, I never stop to place my finger over the point of insertion. No blood or medicine ever follows the needle. There is no swelling where the medicine is deposited. The pain of insertion is no greater. There is no discoloration of the skin. Seldom does any soreness follow, even repeated injections in the same locality.

In the five years I have used this method, I have never seen an abscess, or any bad results, and I get the effect of the medicine much quicker. I never pinch up the skin, or wriggle the needle around to see if I have it in. I send the the needle deep into the muscle, turn the medicine loose, and it takes care of itself.

A few months ago, treating an old lady, I found it necessary to give from one to five injections daily (in the twenty-four hours), for many days. There were weeks that I used the same arm from one to three times daily, and I had little or no soreness, and no discoloration. One day I was away so I could not attend her, and a brother physician was called in. He gave the injection in the usual manner. When I returned the old lady was very angry with the doctor, because her arm was "all black" where he had given the injection. She said; "He just didn't know anything, and I will not have him in the house again." I had hard work to make the old lady believe the doctor had treated her properly.

I use Park, Davis & Co.'s hypodermic tablets usually, though any standard preparation will do. I use clean water, hot to the boiling point and allowed to cool, to dissolve the tablet in. Usually, I heat the water in a teaspoon over a lamp.

I do not wish to be understood as criticising Dr. Ashhurst or others, who have given instructions for the use of the hypodermic syringe, but five years of almost daily use of the instrument, has proved the deep injection always the most satisfactory to me.

Brewers' Yeast in Diabetes.

At the French Congress of Internal Medicine recently held at Bordeaux (*Sem. Med.*, August 21st) Cassaet stated that he had obtained good results in three cases of diabetes by the administration of brewers' yeast in a daily dose of 50 grammes, although the administration of the substance could not be continued sufficiently long on account of the practical difficulty in summer of preventing acetous or putrid fermentation. It was taken readily by the patients. The immediate effect was the expulsion, during the few minutes following its absorption, of a very large quantity of gas by eructation; then in the course of the first or second day extremely fœtid diarrhœa with abundant gas occurred. After a few days tolerance was established, and the patient felt better than he had done for a long time; his general state improved, his appetite returned; his strength increased, and pain diminished. The weight of the three patients in whom the treatment was tried increased three, five, and eight pounds respectively after the yeast had been administered for a fortnight. The gain in weight was particularly remarkable inasmuch as one of them was phtnisical as well as diabetic, and another had diabetes of the gravest type. On discontinuing the treatment loss of weight was soon observed again. As regards strength as tested by the dynamometer an improvement from 12 to 20 kilos. was noted in the right hand, and of 17 to 22 in the left. As regards the urine the urea remained stationary or increased, and the proportion of sugar diminished, in one case by three-fourths, and in another by two-thirds in the fortnight.

COMMUNICATIONS.

DEATH BY THE ALTERNATING CURRENT.*

DRS. EDWIN J. HOUSTON AND A. E. KENNELLY.

Having observed a communication in the *Compes Rendus* of the Académie de Sciences, from M. D'Arsonval in June, 1894, respecting a case of apparent death produced by accidental contact with an alternating current circuit, and the means successfully adopted for reviving the person shocked, we desire to enter our earnest protest against what we regard to be the unwarranted conclusion that Dr. D'Arsonval has apparently drawn from this case, taken in connection with his previous experiments with animals. While we do not for a moment doubt the correctness of the general observations in the case, nor that similar cases may frequently arise in practice, and while we are desirous of fully accrediting to Dr. D'Arsonval the great value of the suggestions made by him, namely, that a person shocked by electricity should be treated as a person drowned, a treatment which we would indorse as being proper to employ in all cases where even the shadow of a doubt exists as to the actuality of death from electricity; yet we desire most emphatically to call in question the correctness of the general conclusion reached by Dr. D'Arsonval, that because in this particular case resuscitation was possible, that all cases in which no marked lesions or evident destruction of the tissues are effected, death is only apparent and resuscitation possible.

In the communication referred to, Dr. D'Arsonval arranges all cases of the passage of powerful alternating currents through the human body into two classes, viz.:

1. Where lesion or destruction of the tissues is produced. (Disruptive and electrolytic effects of discharge).

2. Where the excitation of nerve centers takes place, producing arrested respiration and syncope but without material lesion.

In the first case Dr. D'Arsonval claims that death is absolute; in the second, on the contrary, it is only apparent. As far as we can learn, this classification, as far as human beings are concerned, is based on the actual observation of but a single case. This case he appears to believe sufficiently convincing to warrant the conclusion that all cases in which alternating currents pass through the human body without producing evident lesions are capable of resuscitation.

Further, Dr. D'Arsonval appears to believe that the evidence in this case is sufficiently convincing to warrant the monstrous statement made in his communication that even in the electrocutions in the State of New York, death is not produced by the current, thus leaving the public to infer that it has been produced by the knife of the surgeon, in the autopsy which always follows.

In view of the importance of the subject, we append a translation of the facts described in Dr. D'Arsonval's communication as being those upon which he apparently bases his opinion:

"The following is a statement of facts communicated by MM. Picou and Maurice Leblanc, two well-known electricians who were eye witnesses of the accident and who rescued the man to whom the accident occurred. When the accident happened at Saint Denis, the electrometer at D'Epinay connected between two of our three wires showed 4,500 volts, and an ammeter introduced in one of them showed 0.7 ampere.

"At the spot where the accident occurred the three wires were carried by insulators supported by a bracket on the wall about 6 meters above the floor. The man who was shocked was seated astride the lowest bracket holding one of the conductors in one hand. He had

* Read before the American Electro-Therapeutic Association, New York, September, 1894.

with him a telephone wire which he was about to place in position. This wire rested on the bracket on which the man was seated and came in contact with another of the three wires. The circuit was closed through the man, entering by one hand and leaving by one buttock in direct circuit. He was, therefore, subjected to the full pressue of 4,500 volts at a frequency of about 55 periods. It is difficult to say precisely how long this circuit was maintained, but certainly for several minutes. The short circuit established set up sparks at the commutator of the D'Epinay apparatus. The operator who attended it believed that an accident had happened on the line and telephoned to La Chapelle to stop. All this represents a sufficiently long time. We were leaving D'Epinay at the moment and we were already on the train when informed of the accident which had just happened. About a quarter of an hour afterward we arrived at the Saint Denis. The man was still sitting on the bracket and gave no sign of life. There was considerable difficulty in bringing him down and this operation took at least half an hour.

"Following your advice we practiced artificial respiration by manipulation of the arms and, at first, without result. I then forcibly opened his mouth and pulled forward his tongue. His lungs then operated almost immediately. In two hours he could speak. He was burned on the right hand and on the buttock. He is now well. . . .

"Several days ago they wrote to me again; the injured man is progressing favorably. It is to be observed that no particular trouble due to the passage of the current through his body has been manifested. No attention has been necessary, except to his burns."

In the first place we desire to point out that the pressure alone of 4,500 volts mentioned is without significance, unless it is taken in connection with the current actually passing through the subject under such pressure. We would also point out the fact that a marked difference exists between cases of the application of the alternating current, as employed in electrocution in the State of New York, where the current is deliberately conducted through the body for the purpose of killing, and such cases of accidental contact as that referred to by D'Arsonval. Here, assuming the correctness of the ammeter reading quoted, namely, that a current of only 0.95 ampères was passing, the resistance of the body could not have been less than 6,000 ohms. The resistance of the body between the electrodes used in the electrocutions of New York, *i. e.*, one on the head and the other on the right calf, is sometimes as low as 200 ohms, and usually not more than 300 ohms, the current strength employed being from 5 to 8 ampères, say seven to ten times stronger than that which is stated to have passed in the case mentioned.

In view of these facts we submit, that, in our opinion, Dr. D'Arsonval is entirely unwarranted in drawing the general conclusion already alluded to. Unwilling, however, to base our opinions on mere surmises, we arranged for a series of experiments on dogs in our laboratory, under conditions in which actual facts only were admitted. Being unwilling to leave to our own judgements the question of the actuality of death, we were fortunate in securing the co-operation of the following eminent members of the medical profession in Philadelphia, namely:

Dr. Judson Daland, Instructor in Clinical Medicine, University of Pennsylvania; Dr. G. G. Faught, general practitioner; Prof. L. Webster Fox, Professor of Ophthalmology, Medico-Chirurgical College; Dr. E. Laplace, Professor of Surgery, Medico-Chirurgical College; Dr. William L. Zuill, formerly Professor Veterinary Medicine, University of Pennsylvania.

One of the observers kept the time of all observations; a second recorded all the observations with the time of their occurrence; a third observed the reading of the Weston alternating current voltmeter placed across the supply mains; a fourth observed the reading of the alternating current ammeter placed in circuit with the dog. The alternating current employed was from the street mains making about 130 cycles per second, and at a pressure of about 1,250 volts, reduced in some cases through a 1.5 K. W. transformer to about 700 volts. Four good-sized dogs whose weights were noted were success-

fully subjected to the current and the following observations made:

Observations 8.30 P. M., September 18, 1894. The contacts in these experiments were made by cotton waste, thoroughly soaked in an aqueous solution of common salt of density 1.055, the waste being bound to the part with copper wire to which the electric terminals were attached.

Dog No. 1. Weight 31.5 pound. Contact points right forefoot, (carpus) and left hind foot. Resistance of dog between electrodes 20,480 ohms. Effective alternating voltage 1,250. Circuit closed through animal 8.35 to 30 to 8.35 to 50, *i. e.*, maintained twenty seconds. On the closure of one of the first of the two switches in the dog's circuit, the dog experienced some sensation evidenced by excitement and yelping. This was subsequently ascertained to be caused by leakage through the substance of the slate base of the remaining switch and was found to amount to approximately 2 milliamperes. On closing the second switch about three seconds after the first, there was instant rigidity of the the animal, the dog leaping forward about a foot, the body balanced on the hind legs as in standing, the fore legs apparently flexed, the plunging movement bringing the snout to the ground first, the animal then falling on its side. Dog remained in a state of tetanus till circuit opened. No cry made. Some smoking at point of contact, but no burning. 8.36 P. M., muscles relaxed except in right fore leg where marked rigidity remained. Flesh hot to the touch in the legs which had carried current; 8.37, no evidence of cardiac movement under stethoscopic examination; 8.44, contact points on body still show marked elevation of temperature. 8.45, surface temperature of hind leg (left) 122 degrees, F., 50 degrees C. The rhythmic tractions of the tongue as advocated by Laborde of Paris, were continuously made from 8.45 to 9.43 without effect. It was the opinion of all present that death was instantaneous and painless, and that resuscitation was impossible.

Dog No. 2. Weight 26.5 pounds. Evidencing great fear. Rectal temperature 103.1 degrees F., 39.5 degrees C. Contacts right fore and left hind leg near carpus; 9.05 to 30 P. M. Resistance 17,430 ohms. The voltage 690 before closing circuit, 685 during closure; 9.08, circuit closed for twenty seconds through dog. Current through dog 1.0 ampere steady. Immediately on closure the animal fell on his side without forward movement in condition of tetanic rigidity. Opisthotinotic curve of back. No smoking of contacts. Death evidently instantaneous and painless; 9.11, body removed to examining table; 9.12, no cardiac movement by stethscopic examination; surface temperature of body evidently raised to touch. Optic nerve pale pink; blood vessels full (normal condition in dog stated to be veins prominent, arteries thin and narrow). Corneal epithelium wavy; pupils dilated to fullest extent. Iris almost disappeared. 9.16, rectal temperature 104 degrees F., 40 degrees C.; 9.17, veins on retina have shrunk to a hair line. Optic nerve growing brownish; 9.20, surface temperature, right axilla, 104.4 degrees F. (40.2 C.); 9.34½, optic nerve pale. In the opinion of all present death was instantaneous and painless. An attempt to resuscitate it being considered hopeless.

Dog No. 3. Weight 44 pounds, short hair; 9.23, optic nerve bright pink, pupils dilated. Blood vessels full and easily discerned; 9.35, rectal temperature 102 degrees F. (39 degrees C.); contacts made one on each fore leg above carpus; 9.40, stethoscopic examination of heart shows rate 60 per minute; 9.45, resistance 31,820 between electrodes; 9.47, voltage 700, during application of current, steady at 690; 9.48, circuit closed and current maintained for ten seconds. Current steady 1.8 ampere. Immediately on closing the circuit the dog which had been lying quiescent on one side was thrown into a tetanic state, except a slow waving motion of the left hind leg which rapidly ceased; 9.49 P. M., deglutitious movements. Corneæ insensible. No cardiac movement. Apparent respiratory movements; 9.50 P. M., deglutitious movements still present, flexion of head, no cardiac movement. Respiratory motion ceased; 9.53 P. M., resistance between electrodes 1,207. Rectal temperature 102 degrees F. (39 degrees C.) Rigidity absent. No perceptible surface eleva-

tion of temperature; 9.55, optic nerve pale, with complete change of color. Arteries disappeared; veins growing thinner; 9.55, 30, veins thin as hairs, completely emptied in spots and presenting a beaded appearance; 9.56, optic nerve grayish pink.

In the opinion of observers, death was painless and took place within a minute after the closing of the circuit; also that movements after opening circuit were reflex and spinal. Immediate observation after opening circuits failed to show any evidence by a stethoscopic examination of cardiac movement, nor were they present at any subsequent time. It was also believed that it would be impossible to resuscitate.

Dog No. 4. Short hair, 29.5 pounds. Optic nerve pink, blood vessels full. Contact made by cotton waste pads soaked in saline solution pressed into ears with ear flaps bound over them. Heart rate 140 per minute; 10.11, resistance between electrodes 1,200 ohms; 10.13, voltage 700; 690 during application of current; 10.14 P. M., circuit closed for five seconds. Much smoking and slight charring of hair at electrodes. Current not accurately measured owing to brief interval of application, but estimated 6 amperes. Progressive rigidity. Rectal .evacuations. 10.15, irregular movements of extremities somewhat resembling those made in walking. Most marked on left side. Tail wagging; 10.16, same, more marked; 10.16 30, eyes rotated upward and inward, moderate muscular rigidity of body; beginning to breathe; 10.17, horizontal symmetrical oscillation of eyeballs. Pupils contracted; 10.17 30, movement of eyeball gradually ceasing; 10.18, movement of eyeballs ceased; 10.19, confused heart sounds indistinguishable; 10.19 30, heart sounds now stronger. Convulsive movements of eyeballs; 10.20, heart rate 108, intermitting every third or fourth beats; 10.21, respiration 28 per minute; leg apparently responds to touch; 10.23, Dr. Zuill states that in his opinion the animal is not suffering, but is conscious. It lies perfectly quiet; the respiratory movements good in volume and fairly regular; 10.28, cornea reflex present. Pulling the tail is followed by movements in that appendage, (possibly reflex); 10.31, no respose to sensation, such as pin pricking; 10.32 30, rectal temperature 103 degrees F. The animal lies in a position of full extension; 10.34, attempts voluntary movements to slight extent of disturbance; 10.35 30, same, more marked, but unaffected; 10.39, evident response to disturbing touch. Pupil markedly contracted; 10.40, contraction of pupil as persistent as when observed at 10.17. Hearing evident, responds by muscular movements to sound of a table dragged across the floor; 10.42, placed on his feet with difficulty; finally attempts to stand, but staggers and falls. Co-ordination wanting and improving every second; 18.43, condition apparently dazed, respond to whistle and call. Stands with difficulty and wags tail momentarily. No evidence of suffering. No sound or whimpering; 10.44, condition apparently stuporous, does not respond readily to call or whistle, but evidently notices both; 10.45 30, again responds distinctly to call and whistle. Standing with some effort and wags tail. Apparently conscious. Gives no evidence of suffering, except possibly slow to-and-fro movements of head may be due to pain in it; makes no sound or cry; 10.46, administration of chloroform; 10.47, unconscious with deep inspiration; 10.47 30, stertorous breathing. Hard, rapid, irregular and feeble; 10.40, heart stopped. Relaxation of sphincters. Dog dead.

It was the unanimous opinion of the medical gentlemen present that death was absolute and resuscitation consequently impossible in the first three cases. In the third ease, however, reflex movements exhibited themselves and although the heart had ceased to beat when the first examination was made, death was not reached until about one minute from the time of closing the circuit; also that in the fourth case where a much stronger current under 700 volts pressure passed through the head during five seconds, the loss of consciousness was instantaneous and complete, but the animal revived without the aid of artificial respiration.

We desire to acknowledge our indebtedness to the able scientific observers who aided us in this investigation, and consider ourselves fortunate in having obtained for this purpose the co-operation of men of such acknowledged emi-

nence in their respective specialties. We hope shortly to be able to make more complete investigation of the conditions under which absolute death follows the passage of powerful alternating currents.

We believe that the following conclusions may fairly be drawn as the result of these experiments:

1. That the passage of a sufficiently powerful alternating current through the body of an animal is followed by instantaneous, painless and absolute death.

2. That, consequently, where electrocution is properly carried out, there is not even a remote possibility of subsequent resuscitation of the criminal.

3. That in case of accidental contact, where the current passing is not excessive it is quite possible that death may be apparent only, and that the method of artificial respiration suggested by Dr. D'Arsonval should invariably be followed.

It is a remarkable fact that in the last experiment where the strength of current was much greater than in the previous instances and passed directly through the head (very trifling leakage only being possible over the surface of the skin) the effect of this current was much less upon the vitality than in the preceding cases.

INDICATIONS FOR TOTAL HYSTERECTOMY.*

AUGUSTUS P. CLARKE, A.M., M.D.,† CAMBRIDGE, MASS.

Total hysterectomy should be had recourse to in cases rapidly growing interstitial fibroids, or in cases of large subperitoneal growths developing from a broad sessile base. The operation is indicated, not only from the hemorrhage which they occasion, but also from the pressure which may take place upon the surrounding parts, and from the obstruction they may produce in the vascular tissues in the abdominal and pelvic organs. Palliative measures of treatment, including employment of electricity, may be helpful in overcoming hemorrhage, but the adoption alone of such a course of procedure must necessarily prove disappointing. The importance of resorting to total hysterectomy will be appreciated when the real history of the degenerative processes of such tumors has been more carefully considered.

If a large and rapidly growing fibroid should take on a retrograde process, either spontaneous or through the influence of regular and systematic treatment by electrolysis, or otherwise, the positive ultimate dangers arising from the presence of such a growth will be far from being wholly removed, for in such a stage, when the patient is seemingly improving, the morbid growth may afford a culture chamber into which other disease cells may migrate and then undergo a malignant degeneration. In such a condition, total hysterectomy is the only expedient that will afford a complete and permanent cure. A fibroid tumor developing in the interstitial and parietal portions of the uterus may so extend as to involve the entire body of the organ, overlaping and inclosing in large measure the adnexa, and taking a downward course, include and bury the cervical structures also. In this condition the morbid growth involving the uterine structures may elevate itself from the lower pelvic cavity and thus afford a greater facility for removal through an abdominal section.

The removal of a fibroid should not be deferred because it appears, or is first observed, at or near the menopause, for it is not infrequent for such a tumor to continue to develop long after the occurrence of that period, and it may assume all the phases and present all the untoward results that are attendant on one that has had an earlier beginning.

Treatment of fibroids by a resort to

* Abstract of paper read in the Section on Obstetrics and Diseases of Women, American Medical Association, May, 1895.

† Dean and Professor of Gynecology and Abdominal Surgery of the College of Physicians and Surgeons, Boston, Mass.

salpingo-oöphorectomy, to say the least is of doubtful utility; this method for awhile may give seemingly beneficial results. When it does so, it is evidently because the growth is principally sustained by the ovarian artery; in other cases the results following this method are so unimportant that an operation would seem to offer but little advantage. There are undoubtedly many cases of fibroids in which the nourishment is at certain periods of their growth derived chiefly from the uterine artery. There are also cases of uterine myomata, in which the physical condition of the patient will not warrant a resort to hysterectomy. In this class of cases the method adopted of ligating these vessels has proved to be of considerable service. With our advanced knowledge, however, of the pathology of these neoplasms, and with our increasing experience and achievments in abdominal surgery, we should not advise a woman who is comparatively free from disease, except from the effects which a fibroid may have occasioned, to rest content with merely submitting to such an uncertain surgical measure.

A nodular fibroid of the slower growth should not be regarded with unconcern, for the pressure that may be made by the mass upon the surrounding parts, and especially upon the ureters, may cause chronic edema and finally contracting kidney, as did once occur in one of my own cases, in which the autopsy showed that had the growth been removed the renal lesion would undoubtedly have been avoided and the patient's life been saved. In this connection it might be remarked that the effects of pressure are to be considered, aside from the malignancy, as among the most baneful influences that are attendant on the presence of uterine and ovarian tumors. Uterine myomata in all their various stages call for removal; this should be effected as early as possible. In certain cases the curette can be advantageously employed; if this method is unsuccessful, hysterectomy should be the next surgical expedient. In one case in which a multilocular fibroid appeared, there was but little enlargement of the uterus. Hegar's method for removal of the uterine appendages was performed by a distinguished surgeon resident in another State; the patient, however, did not recover until after the lapse of six years, when she submitted to total hysterectomy.

The ordinary methods of treatment of the more extended forms of adenoma frequently prove unavailing. The study of the pathology of adenomatous formations shows that the hypertrophy of the glands of the lining membrane often extends throughout the entire cavity of the mucous lining. When a uterus has once been affected with this kind of morbid process and the condition does not speedily yield to curettement and to other milder measures of treatment, a more radical course should be instituted. Total hysterectomy offers the best advantage for permanent relief. After sarcoma in any part of the uterine system has been suspected to exist it should be an indication for action; its malignant nature and its unfavorable tendencies when viewed according to the present light afforded by the pathologic history is unquestioned. As in the early stages of cancerous disease, before the para-uterine tissue has become involved in the morbid process, so in sarcomatous development partial removal by the supravaginal method will prove inadequate; nothing less than total ablation of the uterine tissue, including the entire cervix as well as the fundal portion, should for the most part be deemed sufficient for a cure.

The question has been asked, should hysterectomy be restored to for ovarian tumors? In answer to this it may be stated that carcinoma appearing in the ovary is almost always dependent upon the disease previously occurring to some extent in the uterine tissue. Not long since I was called to a case in which the adnexa had a year before been removed for what then appeared to be a malignant condition of those parts. Since that time the uterus and the parametrian tissue had become extensively involved. Had total hysterectomy been carried out at the time of the first operation, before the cancerous elements had advanced, the patient could undoubtedly have been saved. According to later observations and experience, sarcomatous developments occurring in the ovary should be promptly removed;

this can best be effected by total hysterectomy. When papilloma and fibroma occurring as ovarian tumors are recognized at an early stage of their existence, and before they have extended downward to the neighboring tissues, they should be thoroughly and promptly removed, even if it has to be done at the sacrifice of the uterus and its appendages.

It should be here stated that carcinomata and sarcomata in all their various forms call for immediate and thorough removal as soon as a diagnosis of the condition can be made. Experience, however, shows that the results following the removal by hysterectomy of a sarcomatous growth, when the operation is undertaken in a late stage of its existence, will prove to be more satisfactory than will those that may be attendant on the removal, by this method, of a cancerous mass at a similar stage of its existence.

Total hysterectomy is absolutely necessary for uncontrollable prolapse, after anterior and posterior colporrhaphy and other plastic operations have been repeatedly tried, but have failed to produce permanent relief. In such cases the vaginal method is the operation to be preferred. Total hysterectomy is the only safe surgical expedient to be adopted in cases of hemorrhagic polypi which present suspicious microscopic appearances after removal, and which leave as a result an enlarged uterus, as may be determined by palpation or by the sound.

Hysterectomy is called for in ectopic pregnancy; in such cases the hemorrhage can be more safely controlled, and the patient is enabled to make a more rapid recovery than by the other methods of procedure. This method of treatment should be undertaken in ovarian abscess, in pyosalpinx, in old inflammation of the appendages, in a post-clinical severed uterus which has been productive of pain and has been a source of disablement. The operation should be resorted to in all suspicious diseases of the adnexa and in cases of large cysts, as well as in papillomatous developments and in otherwise irremovable cysts and intraligamentous fibroids and tumors of the broad ligaments.

Later experiences show that total hysterectomy can be accomplished with as little danger as may be attendant on many other important surgical measures. When properly performed, there is often but little tenderness left about the vicinity of the broad ligaments. When done in ectopic pregnancy, in ovarian abscess, in pyosalpinx and in purulent liquifaction of a uterine fibroid better drainage can be established. On the other hand, when the uterus or a portion of it is left, the condition resulting is liable to be followed with many complications, with uterine catarrh, malignant degeneration, certain neuroses and with other sequelæ of a painful or of a clinically depressing nature.

Another advantage total hysterectomy insures is that the posterior and anterior folds of the pelvic tissue can be brought together and united by suturing so as to secure better results than when other surgical methods are employed. In bringing these folds together after the uterus has been totally removed, their margins can be turned outward and downward; this arrangement of the parts will thus practically invest the operation with all the advantages that can be secured by the choice of the extraperitoneal method.

I have already stated that the vagina is the natural avenue through which an uncontrollable prolapsed uterus may be removed. This avenue for removal should be especially chosen when the uterus is not enlarged, or when the condition of prolapse is not complicated with the presence of a fibroid or other tumor. In such cases the technique of the operation may not be as difficult to carry out and the patient may not be exposed so long to the influence of the anesthetic as by other methods. The consequent shock will, therefore, not be as great. The same method may occasionally be recommended when hysterectomy is indicated for a cancerous affection which has not extended beyond the cervical portion of the uterus. In those cases, however, of cancer in which the fundus in involved, total ablation of the uterus can best be effected by the vagino-abdominal method. I am not unaware that statistics have been brought forward to show that the adoption alone of vaginal hysterectomy

when undertaken by certain operators has yielded exceptionally good results. In all reports in which such records have been establiahed by work accomplished on a large number of cases I have often felt that the many favorable terminations were, after all, but mere coincidences, or that only those cases for operation were selected that would be advantageous to the showing.

CORRESPONDENCE.

NEWS FROM ABROAD.

BORDEAUX, August 13, 1895.

DEAR DOCTOR RECKEFUS:—This is a city older than the days of Cæsar, for you remember he refers to it in his Commentaries, in which your reading is fresher than mine, for I doubt whether I could quote correctly a single sentence unless possibly the first, beginning, "Omnis Gallia." While of course the greater part of the city is new, one will find here and there among the buildings memorials of the past that have endured through many centuries. For example, on Sunday, I went to the church of St. Michel, which was founded more than a thousand years ago, though rebuilt in the fourteenth century.

The people of Bordeaux compared with those of Paris, seem stronger, healthier, and of better development. This difference I attributed to the purer air, air from mountain and ocean, for the Pyrenees and the Atlantic are not distant; to the less poverty, and the less crowding of the people, for the population of Bordeaux is only a little more than 250,000. Professor Budin, whose kindness to me in various ways I gratefully acknowledge, with whom I conversed on the subject, told me that an important factor was difference is race.

Passing from people to lower animals, I think you would wonder at the large number of donkeys in use here, and at the heavy loads these little creatures draw. You would wonder too, at the great brown goats, with udders and teats that a small Jersey cow might envy, these goats delivering their milk from door to door, a sure way of securing fresh and unadulterated milk.

The hundreds of acres occupied with grape vines, through which one passes in approaching Bordeaux, suggests that the production of wine is one of the greatest and most important industries of this part of France. I suppose Bordeaux wine deserves its high rank, but as I am not a connoisseur, and rarely taste wine, I will not venture an opinion. Indeed in general as to such beverages, I might reply as Diozsim did when asked what kind of wine he liked best, 'Somebody else's.'

But all the land is not given to the culture of the grape, for I saw many fields of wheat, of clover, of rye and oats, and occasionally a patch of Indian corn; but the last was so poor that an Illinois farmer would not let it cumber the ground. Generally oxen or cows seemed to be used in ploughing, except in the vineyards. One of the curious facts observed, the same is universal in Bavaria, was that the so-called ox-yoke was not seen, but a broad band passed over the forehead of the animal had connected with it traces which were attached to the plow. The fact is that the animal pulls by pushing. The obvious explanation doubtless is that the ox is headstrong, but if you can suggest any better, I will not insist upon mine.

Coming to Bordeaux to attend a medical congress, you may think it strange that one of the first places I sought, as soon as I knew enough of the city to find my way about, was the burial place of Montaigne. This is found in the basement of a handsome building occupied by the Faculties of Theology, Science, and Literature of the University. In the vestibule there is a reclining statue of the great author, and the inscription, very brief, and of course in Latin, gives his name as Montanus. It

seemed to me that he was indeed one of the few mountains rising in the broad territory of literature. I have been for many years an admirer of his Essays. In them I find much of classic knowledge. Plato, Plutarch, and Seneca speak again through his pages. Nay not only past knowledge comes afresh in his sentences, but in some thoughts he has anticipated Spencer, for example, and I doubt if Addison would have written as he did had not Montaigne preceded; and I find too, much of practical wisdom and many of the graces of rhetoric.

I will not justify my introduction of Montaigne in this letter, which may find its way to a medical journal, by the fact that he was alleged to have been an eleven months' child, and therefore a prodigy; but justification chiefly is given by my hope that some doctor to whom Montaigne's Essays are as yet an unknown book, may be led to their perusal, thence having similar pleasure and profit to my own. Further, I believe every doctor ought to have a liberal culture, and should know something more than so-called professional works. He will be wiser, better and happier when enriched by the large stores that Montaigne brought from Greece and Rome, and by accepting the spirit of his teaching, peace, gentleness and benevolence among men. But some one reminds me that Montaigne was an avowed sceptic in medicine. Let us accept this scepticism as wisdom, for every wise man to-day could not accept the medical teaching and practice of the sixteenth century. One day we may acknowledge that medical progress owes a debt to the scepticism of Montaigne scarcely less than it does to the raillery of Moliére. Some one of our American medical scholars, like Dr. Thomas C. Minor, of Cincinnati, might give an admirable essay upon the question suggested.

Several congresses were in session at Bordeaux the same time. For example, one for the advancement of the sciences, another for the study of the romance languages, one of medicine, and another of gynecology, obstetrics and pædiatrics. Probably there was an average membership of the two last of 250 members each. A member of a congress was a congressist, plural congressistes; possibly our language needs the word congressist. Referring now to the congress last mentioned, of course the membership was chiefly French, but there were also several from Belgium, Switzerland, Spain, and Italy, a few from Russia, at least one from Holland, but none I think, at least no one of note, from Germany, and none from Great Britain. The only language used was French and my paper was translated into French, and read by Dr. Budin. The congress began on the 8th, and was continued until the 14th; two days were, however, given to excursions, one on Sunday to Biarritz and Dax, and to-day there is an excursion to Archacon; of neither did I avail myself. The morning sessions were of the several sections separately, the time occupied being from nine to twelve. In the afternoon the several sections met together, the session lasting from two to five or six o'clock. The president of the congress was Tarnier. I wish it were in my power to give you an accurate picture of this great teacher. You would hardly think, from his personal appearance that he was a doctor, but would imagine that he was an eminent lawyer, judge, or senator. He is large, somewhat portly, dignified, but at the same time his eyes and face show that he enjoys humor; his mouth is quite large, his hair light brown, and he is not at all bold, shows none of what Jeremy Taylor called undressing for the grave. He is now sixty-seven years old, but shows unabated vigor in movement, in thought, and speech. He is one of the most impressive speakers I ever heard, and at the same time he seems one having a reserved force. Let me remark that I have never been in a medical society in which I have heard better speaking than in this congress, nor have I witnessed more grace of oratory, more force of utterance. Among those whose manner struck me as notably excellent was La Torre of Rome. He is tall, not less than six feet, well proportioned, a clear, musical voice, very graceful and correct in his gesticulations, and forcible in his utterance. When you first see him, his peculiar complexion, not so much an olive hue as dark yellow seems suggestive of possible jaundice, and your sympathy may be excited by the supposed hepatic disease. I am told by one of my friends in the congress that La

Torre's French would not escape criticism, but fortunately my knowledge of spoken French is not sufficient to abate my admiration by a recognition of these defects. Budin has the air of a scholar, and the manner of a teacher; no one was listened to more attentively, for the hearer was sure to learn something new from him. Dr. Lefour, of Bordeaux, the general secretary of the congress, is also to be ranked among the able speakers. My friend Dr. Cordes, of Geneva, is most instructive, and always secured the attention of the members. Vulliet, also of Geneva, is impressive by his personal appearance, and effective as a speaker. Treub, professor of obstetrics and diseases of women in the University of Leyden, is a typical Hollander in personal appearance, deliberate in his ways and speech, and showing none of the fervor and vivacity of Frenchmen, Italian, Spaniard, or of the Swiss. Eustache, whose contributions to obstetrics and diseases of women I have always read with great interest, does not present the personal appearance I expected; he is tall, his head by no means corresponding with his height, his form somewhat ungainly, and as a speaker several members of the congress were his superiors. Professor Crouzot, of Toulouse, is a man whose appearance and manner impress one most favorably. He has recently invented a traction forceps, which he was kind enough to show me, giving a complete explanation, an instrument that seems to me from this cursory examination, the only real improvement upon the axis-traction instrument of Tarnier.

There were so many subjects brought before the general congress, and before the individual sections, that even their enumeration would be tedious. Undoubtedly there were some papers of great value presented, but I believe that the congress lasted too long, had too many sections, that is two too many, when there should have been only one, and that fewer subjects should have been presented.

I am writing these lines while most of the members of congress are starting upon the day's excursion, and just before I begin my journey to Berlin. You know it was my intention to go from Bordeaux to Geneva, and from there to Munich, then to Berlin. But a letter received by me from my kind friend, Professor Martin, informs me that he will soon leave for Carlsbad; and I cannot fail to see him, so that I proceed to Berlin, quoting Cæsar, *summa diligentia*, translated, as you know by one of the most brilliant Irish writers, on the top of the diligence. When in Berlin, I may write up some of the discussions in the congress, or give an abstract of a few of the papers, unless perchance I find some more interesting matters to communicate to you. Montaigne once said that infants having become rugged and strong from the good milk they have sucked, often strike their nurse. Let us always be grateful for the good we get, the improvement in our knowledge, whether at home or abroad, and refrain from all injury to one who has helped us.

While in Bordeaux I first learned certainly of the death of that noble man and illustrious member of the profession, Thomas Addis Emmet. A rumor of this event reached me in Holland, but it was not until I met Dr. Jacobs, of Brussels, that the rumor was verified. Emmet occupies a unique place in American medicine. He was one of the few men who did original work; he was a voice, not an echo, and his real greatness will grow upon men. His artistic power was small, so his illustrations often failed of producing clear effects, and his style may not have been sufficiently condensed and plain, but still he has been a great teacher, and such a title justly belongs to few men in a generation.

Personally too, Emmet was an admirable man. He was kind and generous, and thoroughly honest; there was not the least appearance of sham and pretence, not the slightest trickery or treachery; he had nothing of what another dear friend in the New York profession, also, alas, gone, Fordyce Barker, characterised as fascinating insincerity. I wish there were more men among doctors like Emmet morally. Peace to his ashes, and greater, growing glory to his memory,

Sincerely,

THEOPHILUS PARVIN.

VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.

EDITOR MEDICAL AND SURGICAL REPORTER:—I see reports of many different writers recommending as many methods of treating puerperal convulsions. I have felt it a duty I owe to the profession to give the benefit of my experience in this trouble.

In July, 1880, I attended in confinement Mrs. M., a primipara. She was delivered in reasonable time, of a healthy, well-developed, male child. About twelve hours after confinement she was taken with violent convulsions. I plied her with chloral, chloroform, tr. veratrum by the mouth, and other things which I do not now remember. But to no purpose. The convulsions recurred with increasing violence and frequency for twenty-four hours, by which time the patient, a beautiful woman, looked like a bloated sot. She had sunk so low that she was unable to swallow. I concluded to try veratrum by hypodermic injection. I gave her four drops of Norwood's tincture. In twenty minutes she had another convulsion. I gave her four drops more of the veratrum. In twenty minutes more every vestige of the besotted appearance had left her face. All of the attendants remarked it as wonderful. They, with myself, felt that she was relieved. She had not another convulsion, and made an uninterrupted recovery.

The next case was a negress, a primipara, who had been in convulsions for twelve hours. I gave like doses, at like intervals, and with like results, the bloated appearance subsiding at once. She had no convulsions after the second dose.

The difference between these cases—the first had post-partem, and the second ante-partem convulsions. The latter went on two weeks to term, and was delivered of a healthy child.

All authorities advise immediate delivery, but with veratrum controlling the spasms, the necessity for immediate delivery is relieved.

I will not detail any more cases, but will make this statement: That Norwood's tincture of veratrum viride by hypodermic injection is a specific for puerperal convulsions, regardless of the stage of pregnancy, or whether occurring before, during, or after labor. My experience extends over twenty cases in my own practice, and in the practices of colleagues to whom I had given the information.

I have tried other preparations of veratrum and when they have failed, I would procure Norwood's tincture. In every instance it has succeeded. I make this statement because, if an ordinary tincture should be used and fail, the physician would be disappointed, and, possibly, his patient might die. The reason for the different result is probably the difference in the care of manufacture.

The dose for a medium-sized woman should be seven or eight drops, repeated every twenty or thirty minutes. I generally have given four-drop doses, repeated at short intervals. But I think a larger dose would be safe and, perhaps would be sooner efficient.

I have seen many publications on the hypodermic use of veratrum in these cases. I do not know whether the writers got their information from parties to whom I had imparted it, or whether they learned as I did, by experimentation in a desperate case, nor does it make any difference. The profession now has the power to control what, to anyone who has witnessed or had charge of such a case, is one of the most horrible as well as fatal of diseases that are peculiar to the parturient state. I have tried it in all stages and I know that it will control the convulsions as certainly as an acid will neutralize an alkali. As to how and why, "this deponent sayeth not," but it does.

Respectfully,

F. B. HAMILTON, M.D.

Jackson, Tenn.

A Correction.

EDITOR MEDICAL AND SURGICAL REPORTER:—Looking over my article of a few months since, entitled *Diphtheria*, I was mortified to see that, on the second page, I have written, "that in all these years, from 1829 to this day, not one of the many hundreds of cases of measles, etc., treated by the cooling system, proved fatal."

The "etc." should not have been there. The success spoken of applied only to measles, of which I never lost a case. Of scarlet fever and diphtheria, I have lost a good many—some more than would have been lost had the nurses followed directions properly.

In all that I have written I know of no other error.

HIRAM CORSON, M. D.
Plymouth Meeting, Pa.

An Invitation

EDITOR MEDICAL AND SURGICAL REPORTER:—From the present outlook the "Cotton States and International Exposition" will be one of the "events" in the history of our country, and especially of the South. Realizing the immense number of physicians who will be present from all parts of the United States and other countries, I have decided to offer my mite of Southern hospitality to my visiting brethren. Therefore, I extend a cordial invitation to any physician who may visit our city, to make my office his headquarters. Send mail, telegrams, etc., in my care, and I will cheerfully engage rooms, etc., in advance for anyone if advised to do so. The only request I make is to enclose postage for letters of inquiry, which will be cheerfully answered. For any services I may render no fee, commission, or any perquisites whatever, will be received or expected.

Fraternally yours,
GEORGE BROWN, M. D.
23½ Whitehall St., Atlanta, Ga.

Russia's Abolition of Private Saloons.

By far the most important evidence of this trend of European public opinion is to be found in the action that Russia has now taken. In all the history of the modern temperance movement, no public law or decree has ever attempted any task so gigantic or of such far-reaching importance as that which Russia's new law has undertaken. For Russia has determined upon nothing less than a complete government monopoly of the manufacture and sale of the liquor supply of the entire empire. Somewhat more than two years are to be allowed for the system to attain completeness. It is to be put in force in eight provinces on the first day of July, 1896, in seven other provinces on the first day of July, 1897, and throughout all the rest of the empire on the first day of January, 1898. Saloon keeping as a private business will be altogether abolished. The French attempt at a monopoly of wholesale supply has been based very largely upon considerations of public revenue. It does not appear that the new Russian policy rests so much upon financial motives as upon a desire to rid the Russian people once and for all of the demoralizing influences of the liquor traffic as privately conducted.—*From "The Progress of the World," in the September Review of Reviews.*

Suggested Improvements in Weather Forecasting.

Now, in meteorology the weather map has played, and is still playing, an important part, but as a means of adding to our knowledge and forming a true studo of atmospheric changes its usefulness is almost exhausted. Further advance is necessary if we are to successfully forecast local storms, fogs, rain, snow, hail, moderate temperature changes and the like, but this advance is probable only by the efforts of competent scientific students, chiefly physicists and mathematicians. There must be the opportunity for some Galileo, Kepler, Copernicus and Newton if we are to lift the art of weather forecasting from its present ptolemaic stage into the stage of true theory as they lifted astronomy. The opportunities needed can probably be furnished only by government, because the present establishment is a governmental one and its services will be needed in the work, and also because meteorology is a general terrestrial science, and like geology, is too great for private resources. The time involved in such investigations as are needed is entirely uncertain. Some of the improvements, the forecast of fog, for instance, would come very easily. A single year of systematic investigation by a competent person with proper assistance and an expenditure of perhaps $5,000 would probably accomplish it.—*From "The Value of Weather Forecasts to Agriculture and Inland Commerce," by Professor Mark W. Harrington, in the Review of Reviews.*

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PHILADELPHIA, SATURDAY, SEPTEMBER 14, 1895.

EDITORIAL.

DEGENERATE LITERATURE AND ART.

As a writer, Dr. Max Nordau is generally imaginative, occasionally instructive, always interesting. He is known in this country as the author of "Degeneration," an entertaining book which sometimes puzzles one as to whether it should be taken in earnest or regarded as a joke, although the intentions of the author are obviously serious. "Degeneration" aroused such popular interest as to amount to a literary fad, and, it is altogether probable, will follow like fashionable sensations into the oblivion of innocuous desuetude. Dr. Nordau did not discover degeneration; neither was he the first to call attention to it; nor is the subject exhausted with his disquisition thereon.

Fortunately Dr. Nordau does not rest with calling the world's attention to the alarming condition of its inhabitants, and in a recent number of the *Forum* he presents "Society's Protection Against the Degenerates." This article is fully as interesting as his more elaborate work, and, in addition, contains some suggestions which have the merit of good common sense.

He assumes that, "the fact that literature and art have become more pathological of late years, is conceded to-day by every earnest observer," and that, whatever may be the differences in judgment concerning individual poets or artists, "every healthy mind must find Nietzsche's ideal of the bloodthirsty 'superhuman being' criminal, the lisping and stammering of Macterlinck's dramatic forms idiotic, the culture of the *Ego* in a Barrès anti-social, and that the teaching of Tolstoï touching the perniciousness of knowledge is inimical to progress."

His theme is the fatuous proposition of an immature Italian student, Ferrero, who advances an opinion that, "the mystical and morbid in art and literature protect society against many abnor-

mal tendencies which otherwise would have developed into action."

Ferrero says: "These tendencies usually remaining latent are no interruption to a position in social life; under the influences of excitement or suggestion, however, a development into positive wickedness might readily occur. Happily these books in creating a literary satisfaction prevent such individuals from seeking a further fruition in real life."

"With the immense, ever-increasing number of neurotic, hysterical, half-crazy and singular beings with whom our contemporary society swarms, great psychical epidemics would, I believe, break out to disturb social life seriously were there not happily always books which divert their abnormal inclinations into literary tendencies."

Nordau questions the accuracy of this specious presentment. He admits that there are degenerates who, "exhaust their obsessions and impulses in literary and artistic activity," but, says he, "the truth is, one seldom hears of gross crimes in the degenerates of art and literature, not indeed because their activity protects them from the commitment, but because the mental disturbance is not of the sort which leads one to criminal deeds. It is not to be thought that every criminal conception or desire arising in the like abnormal brain can transform itself into action.

"The artistic and literary activity is, even for the productive degenerates, only conditionally an outlet for worse manifestations of their mental state. Of the deducible effect of morbid productions on the recipient masses, on the reading and observing public, there can be no question.

"To recommend degenerate books to neurotic or hysterical readers is not only to vaccinate but to inocculate them. There is here certainly a communication of the disease, whereas, according to Ferrero, the method should prove the preservative. An unhealthy imagination finds in the wild lucubrations of the degenerates welcome nourishment and a pattern zealously to be imitated. Every dormant inclination is awakened and monstrously developed by this sort of reading. Far from causing a satisfaction of these morbid tendencies that shall no longer seek perpetuation in deeds, such reading only strengthens what becomes an imperative necessity to commit crime and immorality. Every educator, criminologist, and neuropathic physician, everyone who has carefully followed the etiology of aberration will agree with me.

"It should be remembered that every human mind contains every species of aberration and delirium in the germ. In frenzy, even when most violently developed, nothing new is present to the accustomed domain of thought. Only a change of proportion and relation occur. The normal equilibrium between the various nerve-centres is suspended. One faculty, for instance motor-impulse, is strengthened; the other, such as memory or inhibition, becomes weakened. According to this, then, insanity is an augmentation of one cerebral function, or the diminution of another. It contains, however, no element that could not be demonstrated as present in the most normal brain. How, then, in spite of this, do we retain a healthy mental state? For two reasons only. We do not cultivate the germs of aberration and delirium contained in our brains, and should they develop without our attention, we retain the will as well as the power to suppress them. Fail to regard these two reasons, cultivate the germs of insanity and perversion in the human mind, weaken the will and the power to suppress them, with the result that a race of madmen will speed-

ily develop, who would perhaps have remained quite healthy had their morbid tendencies not been encouraged. The immense influence of the literature of fiction on the masses is not, perhaps, given its due weight. Fiction exercises a powerful and an unremitting, suggestive influence, which subjugates the whole mental personality, manner of thought and action of the reader.

"It is plain that the average person is greatly attracted to morbid literature and art by the evil suggestions and abnormal condition it increases, for it weakens inhibition, teaching lack of justification and non-resistance. Degenerate poets and artists have thrown a light upon certain evil instincts which heretofore have been only confusedly felt and indistinctly understood, but which now assume determined outlines. They even exercise a baneful influence on those who, having nothing more to learn from these masters and leaders, are perfectly aware of their own degradation; the injury lies in the encouragement to throw off the mask of respectability, to make open confession of the aberration which finds expression in morbid productions. The significance of such influence should not be undervalued.

"Degenerative art and literature are from beginning to end but the rehabilitation of all that civilization up to this time has stamped as injurious and vicious. It is the glorification of what heretofore has been considered only shameful. Brutal egotism was formerly a vice whose dominating influence was carefully concealed. Now, however, it is known as Nietzscheism, and is regarded as a boastful mental distinction. Formerly a woman who maintained some irregular relationship shunned the light of day, assuming at least the pretension of honesty; now, however, she is proud of the distinction, is called an Ibsenite, while her unscrupulousness places her among the *elite*. The result is doubly injurious. It liberates the vicious from the necessity of assuming a virtue and deprives them of the slight benefit of this mental gymnastic, while the slaves of fashion are taught to imitate the attitude of the depraved, which, in its reflex action on the mind, helps to inculcate a vice that originally they may not have possessed.

"He who surveys the harm accomplished by morbid art and literature,—its evil suggestion to harmless readers; the germ of aberration cultivated in abnormal readers; the cognizance of undefined instincts generating madness and wickedness; the power and desire for self-control weakened; cynicism assuming the place of hardly-won reserve; the attitude of viciousness or madness become the fashion for stupid and hitherto harmless snobs,—will surely encourage any counteracting influence on these productions. The question is only this: How shall it be accomplished?"

A Case of Primary Rheumatic Inflammation of the Serous Membranes.

Thiele (Charité-Annalen, 1894, bd. 19) has noted, with Fiedler, polyarthritis rheumatica occasionally occurs without swelling or reddening of the joints; in other words, that the virus expends its force on other serous membranes, especially the peritoneum and pericardium. He describes a case of a 19-year old girl, of previous good health, who was taken with chills, fever, and severe general symptoms. There was found an inflammatory exudate in the pericardium, both pleuræ, and the peritoneum. The exudate accumulated very rapidly, and quite as rapidly disappeared. As pyæmia, tuberculosis and pneumonia could be excluded, no other diagnosis than rheumatic inflammation was possible.

ABSTRACTS.

GONORRHEA IN MAN.*

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Gonorrhea, derived from gonos, semen, and rheo, to flow, meaning flow of semen, was so called because it was supposed for a long time to be a disease of the secretory apparatus, resulting in a more or less constant flow of semen from the urethra. As time advances, however, the name gonorrhea seems to be going out of use, while the more proper term, urethritis, signifying an inflammation of the mucous membrane of the urethra, is justly gaining ground.

This disease seems to have been known since the earliest days of medicine, as both Hippocrates and Celsus referred to it in their ancient writings, and considered it contageous. About the time of the discovery of this country syphilis became prevalent in Europe, and was a long time considered as related to gonorrhea, and due to the same virus. This mistake was founded on the ground that both were due to sexual intercourse. From this time up to that of our revolution this view held sway, when John Hunter claimed that they were two distinct diseases, and to prove it inoculated himself with the pus from a case of urethritis. Unfortunately, however, the patient was suffering from an unrecognized syphilis at the time. Hunter contracted the disease, and thus became firmly convinced that he had been mistaken, and that the two affections were different forms of the same disease. This delayed the true recognition of urethritis for many years longer, and it was not until Ricord's investigations in the time of our fathers that the difference between the two was clearly shown.

Urethritis is usually due to direct contact with the genitals of a female suffering from the disease, from which there is some discharge containing the infection. Rarely it may be due to indirect causes, as by the use of infected towels, etc. Two varieties are spoken of, which I will term urethritis and pseudo-urethritis. The former constitutes nearly every case of acute running clap, and is due to the gonococcus of Neisser. The latter embraces the so-called "strains" and slight ephemeral discharges. Others of the so-called strains occur in men who are suffering from such a mild form of chronic urethritis that no discharge has appeared at the meatus for some time. They imagine themselves well, but a careful examination would reveal foci of the disease.

The infection, consisting of matter containing the microbe, gonococcus, finds its way to the mucous membrane of the urethra. The germs make their way through the epithelial layer to the subepithelial tissue, where they excite an inflammation, evidencing itself in a hyperemia and serous exudation. There is an exfoliation of urethral epithelium and an increased secretion from the glands of the urethra. Leucocytes next make their way through the dilated capillaries, absorbing and carrying with them large quantities of gonococci. The mucous membrane now appears thickened, of a deeper red, and is bathed in a mucopurulent secretion. Erosions and small ulcerative patches are sometimes present. The mucous follicles appear congested and elevated.

The leucocytes having borne the micro-organisms to the surface, where they are discharged, the process of repair begins and the symptoms subside. Resolution takes place most slowly in the urethral glands. These continue to discharge pus for some time after the inflammation in the remainder of the ure-

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thra has disappeared. If the erosions and ulcerative patches do not heal, the inflammation becomes localized and chronic. Sometimes on these denuded or ulcerative areas, small granulations develop, forming the granular patches so often seen in endoscopic examinations. At other times the general hyperemia may become localized at one or more points, causing a chronic urethral irritation and discharge.

The other most frequent cause of chronicity is the persistence of the inflammation in the urethral glands and the formation of strictures. Strictures are due to a localized chronic inflammation occurring beneath the granular patches or around the urethral glands with the consequent interstitial changes, the pathology of which I will not go into. These I will consider as of three varieties: the soft, the resilient, and the hard. The first variety is usually recent, the second of variable duration, and the third an old process. Another variety, the congenital form, is located near the meatus, and is remarkably unyield ing.

In these conditions of chronic urethritis the discharge from the lesions just mentioned may be sufficient to reach the meatus and manifest itself as a drop or slight moisture. Often, however, it is not sufficient, and becomes deposited along the walls of the urethra. These deposits are rolled up by the urine passing over them, and washed out. They show themselves in the urine as shreds or flakes, called by the Germans "Tripperfaeden," and consist of mucus, pus, epithelium, and some gonococci.

The period of incubation in cases of urethritis is from 1 to 14 days, although the discharge is generally first noticed about the third day.

Shortly after a suspicious coitus the patient experiences an uncomfortable itching sensation about the meatus, followed by a slight burning during micturition. Inspection now reveals a slight moisture, or a drop of muco-pus, at the meatus, which is somewhat congested. These symptoms increase rapidly in severity, the congestion of the meatus and glands becomes more marked, and the prepuce is often edematous. The discharge becomes thicker and more yellowish or greenish in color, and the micturition more painful. The symptoms continue to increase steadily for 1 to 2 weeks, when they turn and subside slowly. When the disease reaches the posterior urethra the symptoms are generally modified.

Posterior Urethritis is considered by some as a complication of an anterior urethritis. Personally, I regard it as an extension of the disease to the deep urethra, membranous and prostatic. Authorities differ in regard to its frequency, some placing it as high as 80 per cent. It is my opinion that it occurs in fully that proportion, if not oftener, and that the reason why it is often overlooked is because its occurrence is not marked by symptoms sufficiently severe to cause much complaint. Finger, in 1883, seemed to be of the opinion that in all cases the inflammation extended to the posterior urethra, and stated that the disease traveled slowly down the urethra, and reached the vesical neck on about the tenth day. The reason why this inflammation is supposed not to extend more frequently to this part of the canal, and, at times, not to cause severe symptoms, is because the membranous urethra is much less vascular and almost devoid of glands and follicles, and consequently not so well adapted to assist in its march. The patients in whom marked symptons of this condition occur are those who are "below par," of a nervous temperament, or who have indulged too freely in alcoholics and venery. It may occur at any period during the attack, but usually not before the tenth day, and most frequently in the third or fourth week.

When this extension takes place the patient notices a feeling of discomfort, heat, and heaviness in the perineum, with increased frequency of urination. The desire to urinate is sudden and at times uncontrollable, and on finishing there is a tenesmus, a straining to squeeze out a few more drops. In severe cases the patient passes his urine every few minutes during the day and many times during the night, each urination being accompanied by pain and occasionally blood. Frequent erections and emissions during the night also occur.

When this condition is subacute and

the symptoms not marked, the "two-glass test" is used for determining its presence or absence. The urine in these cases is thick and cloudy, and in the morning, especially after a long sleep, considerable pus is found in it.

Chronic Urethritis is said to exist when, after a duration of six weeks, some discharge is still present. This usually manifests itself as a slight moisture during the day, with a drop at the meatus in the morning, known by the French as the goutte militaire, on account of its frequency among soldiers. This is sometimes called gleet, and the discharge is spoken of as gleety. In cases where the discharge is so slight that nothing is apparent at the meatus during the day, and there is only a slight moisture in the morning, Trip-perfaeden are usually found pointing to some localized inflammation. This is generally due to the presence of granular patches, ulcerations, denudations, localized hyperemias, or strictures along the canal.

Experience has taught me that the majority of cases of chronic urethritis, especially if they have had previous attacks of urethral trouble, are due to strictures, with localized congestions posterior to them. In case that a patient presents himself with symptoms of chronic urethritis, my method of examining him is briefly as follows:

I examine his meatus for a discharge, which, if present, points to the existence of an anterior inflammation. I then wash out his anterior urethra with a soft rubber or glass tube passed down to the bulb. The patient then passes his urine in two glasses. If the contents of the first glass show more flakes than the second, I conclude that a posterior urethritis is also present. If there are no flakes in either glass and the urine is clear, it is an evidence that there is no posterior trouble. My next step is to examine the urethra, with the acorn-bulb bougies, to ascertain the presence or absence of strictures. After this I endoscope the urethra to discover if any granular patches, localized congestions, denudations, or ulcerations are present. The washings of the anterior urethra may also be examined.

The difference between urethritis and pseudo-urethritis is not marked on first appearance. The microscope will usually determine it; and a few days will generally clear it up clinically, as the former becomes rapidly worse, whereas the latter becomes rapidly better. Much more frequently, however, it is confused with an exacerbation of a latent attack, which has existed for months, and where gonococci have always been present. The history of the case will usually make this clear, as such a condition is generally found in men who, during their attacks, have become tired of treatment and allowed it to "wear off."

Chancroidal ulcers and chancres in the urethra are often confused with urethritis, as they cause considerable urethral discharge. In the former the condition is easily recognized from the loss of tissue and active ulceration about the meatus In the latter the diagnosis is often difficult, as the induration is such that we cannot open the meatus widely enough for a thorough examination, and because the glans is usually much congested. I can recommend, in examining these cases, a wire nasal speculum, which exposes them better than any other instrument.

There is sometimes a slight muco-purulent discharge during the active second stage of syphilis, which is supposed to be due to mucous patches in the urethra.

Uncomplicated, the disease usually lasts from four to six weeks. If it lasts over six weeks, it may be considered chronic.

A case is considered cured when the discharge has ceased—that is, does not appear at the meatus or stain the patient's linen. The disease may, however, remain in a localized, or very subacute, state for some time after this, as is evidenced by flakes or shreds in the urine. Some authorities hold that as long as these shreds can be found the patient has not recovered. I presume that they are right, but think, in the vast majority of cases, where they are still noticed after the dischagre from the meatus has ceased, that they will disappear if the patient abstains from alcoholics and venery for a few weeks. The tendency for a man who has just recovered from a urethritis is, however, to indulge in both of these as soon and as often as possible.

The occurrence of posterior urethritis,

complications, or the presence of strictures makes it extremely difficult to form a correct prognosis.

In my own practice this depends on certain conditions:

1. The stage of inflammation in which the patient presents himself.
2. The presence or absence of posterior urethritis.
3. The presence or absence of strictures.

If the patient presents himself in the first stage of a very acute attack, evidencing itself in an abundant discharge and great congestion about the meatus, glans, and prepuce, accompanied by painful micturition, I usually delay active treatment for a while and try to make him comfortable.

I gave him a diluent, usually the A. B. C. effervescing diluent tablet made by Fraser & Co., which contains 5 grains each of the citrate and the bicarbonate of potassium and dissolves with effervescence, in a glass of water. I direct him to take as many as he likes during the twenty-four hours, and at least six. I also put him on either cubebs in teaspoonful doses, every three hours, or santal-midi capsules, beginning with one and running up to four three times a day. His bowels are kept open with rochelle salts, and two hot sitz-baths a day are taken. In addition to this, I regulate the diet, cutting off all stimulants, tobacco, pepper, and asparagus, and order a suspensory bandage to be worn.

This will usually take down the congestion sufficiently in less than three days to allow him to commence astringent injections or hot irrigations. These do not conflict with each other, and may be used together, if one chooses.

As, however, by far the majority of cases coming to me do not have the very acute symptoms mentioned above, and are suffering from a second or third infection, I am not obliged to resort to the palliative measures just referred to, but put them on injections or irrigations, accompanied by the diluents already spoken of. Formerly, I began always with hand injections, and did not resort to irrigations until it seemed that the former were not acting efficaciously. At present, if the patient can come often, I start in with mild irrigations, given once a day, and accompanying them by a bland and slightly astringent hand injection. If the patient is in a hospital ward, I give two irrigations a day, and in that case do not think it advisable to use the hand injections in connection with them; but when the irrigations are from twenty-four to seventy-two hours apart, it appears to me that the hand injections materially assist by holding the ground gained through the irrigations.

The hand injection should be of the blandest type, as one made from zinc, alum, or lead, dissolved is rosewater. The irrigations should be of solutions of potassium permanganate or silver nitrate. Bichloride of mercury solution is sometimes used, but seems to be more irritating than the first two mentioned. If permanganate is used, I start in with a 1 in 5,000 solution and increase it to a 1 in 2,000; if silver nitrate, I commence with 1 in 8,000 and run it up as high as 1 in 2,000. When I first began to irrigate, I was in the habit of starting with permanganate and not using the nitrate of silver unless the former failed to prove efficacious or did not agree with the patient. Later on, having observed that patients improved more rapidly under the silver irrigations than under permanganate, I began to reverse my order and use silver first, and permanganate only in those cases which did not improve under silver.

My method of irrigating is as follows: The patient, having passed his water, lies on his back with the shoulders elevated. The douche-jar is raised to a height of two feet, and a tube, made of glass or soft rubber, is introduced into the urethra as far as the bulb. The fluid is then allowed to escape into the urethra, which it irrigates thoroughly, escaping by the side of the tube. Of the two tubes, the glass is preferable, as it is more easily kept clean. In sensitive urethras, however, the soft rubber retrojecting tube is much preferred by the patient. The irrigating fluids should be used as hot as they can be borne.

Up to this point I have been speaking simply of the treatment of anterior urethritis. If posterior urethritis develops during treatment, or the patient first appears suffering from an antero-posterior inflammation, I do not give any

hand injections, but modify my method of irrigating and add to my internal treatment. My method of modifying the irrigation is by increasing the height of the douche-jar from two to five feet. Then when the fluid is running freely through the urethra and escaping along the sides of the catheter, I simply grasp the organ between my thumb and forefinger and compress the urethra against the tube. If the solution now runs into the bladder, it is only necessary to allow it to do so until that viscus is full; but if it does not overcome the "cut-off" muscle, I direct the patient to strain, as if about to urinate, and then to take a few deep breaths. This is usually sufficient to allow the fluid to overcome the muscle and flow into the bladder. They then urinate it out, thus allowing it to again come in contact with the entire urethra. In adding to my internal treatment, I give ten drops of belladonna three times a day to overcome the tenesmus, and sandalwood oil or santal-midi to modify the urine passing through the canal; if the sandalwood oil, I begin with 15 drops three times a day, and increase 5 drops a day as long as it is well borne; if the santal-midi, I start with one capsule and increase to four three times a day.

In case the preparations of sandalwood oil do not agree with the patient, I often give other antiblennorrhagics, as cubebs or copaiba. I think that the sandalwood preparations should receive the first consideration, as they do not irritate the digestive and genito-urinary tracts as much as the others.

If irrigations do not seem to benefit the posterior urethritis, I leave off the general treatment of the urethra and give, locally, posterior instillation of nitrate of silver every other day, by means of the Ultzman syringe, beginning with a one-grain-to-the-ounce solution, and increasing it gradually in strength.

In certain very acute cases of posterior urethritis, especially in individuals who are nervous or "below par," a great deal of inconvenience and suffering is experienced, as the calls to urinate are frequent and imperative, and are accompanied by much tenesmus. For these cases I prescribe complete rest, accompanied by hot sitz-baths, rectal enemata of hot water, suppositories of belladonna extract and morphine (one-fourth grain each), rochelle salts mornings, and a milk and vichy diet for a few days, until the symptoms have subsided sufficiently to begin deep irrigations or installations. In regard to the treatment of chronic urethritis, or gleet—that is, when the patient has a slight moisture during the day and a drop at the meatus in the morning, and where any indulgence in alcoholics causes an exacerbation of the trouble—I examine for strictures with a bulbous sound and endoscope the canal. If strictures exist which are new or yielding, I dilate them by means of the Oberlaender dilator by easy stages, generally increasing the lumen of the strictured portion of the urethra two millimeters at each treatment, afterward passing sounds of the Otis curve, anointed with equal parts of an ointment of red oxide of mercury and vaselin. If the strictures are hard and tough, or if we have a resilient one, which does not seem to be benefited much by dilatation, I advise an internal urethrotomy by the Otis method. After the urethra has a smooth bore, if the gleety discharges continue, the endoscope will usually reveal some localized areas of congestion or inflammation, which are best treated by applications of silver nitrate, from one to twenty grains to the ounce, through this instrument.

In this way the most rebellious cases of chronic urethritis or gleet are cured. Patients must not be discouraged if several months pass by before this is accomplished, for, if the patient should become tired of treatment and allow it to "wear off," some foci of the disease may remain, which might be sufficient to infect any female with whom he may cohabit.

In closing I should like to call attention to one point in the treatment, and that is the difference in the ability of the patient to tolerate solutions of the same strength by different methods. For instance, a patient will complain as much of a 1 : 1,000 solution of nitrate of silver by irrigation as of a 1 : 50 solution by hand injection, although one is twenty times as strong as the other.—*Amer. Med. Surg. Bul.*

ACETANILID AS AN ANTISEPTIC SURGICAL DRESSING.

Wm. A. Edwards, *Southern California Practitioner* for August, writes:—For the past five months, since the appearance of Morton's paper, I have been employing acetanilid in surgery as a substitute for iodoform and its various combinations. Its use has been so satisfactory that it is with pleasure this little clinical note is written and my testimony is added to that of others who have written in laudatory terms of the drug.

When applied to a wound it produces intense dryness, but no complaints have been made of a burning sensation when the drug has been applied alone; but when boracic acid is added this sensation is often complained of to a marked degree.

We have used the drug in the following combinations: various percentages of acetanilid with boracic acid, from 25 per cent. to 80 per cent. of the former; the pure powdered acetanilid; five and ten per cent. gauze; alcoholic solution and the drug suspended in normal salt solution.

I have not used it with liquid petroleum, 40 grains to the ounce, or with ether or chloroform. Suspended in water it serves well for injection into abscesses or sinuses. In ordinary cocoa-butter suppositories it is very efficacious in rectal affections, ulcers, or inflamed hemorrhoids.

In the following cases we have observed most gratifying results: A tuberculous abscess in Scarpa's triangle in a boy; tuberculous abscess of cervical glands; an extensive breast amputation for carcinoma in which it was necessary to sacrifice a great deal of tissue; gunshot wound of the gastrocnemius; subrapubic lithotomoy in which a necrotic fat abscess formed on the thirteenth day; hemorrhoids, rectal ulcerations and fissures. It will be seen by this list that the drug has been freely tried under many different conditions with success. There are, however, a small minority of cases in which acetanilid cannot be used just as some persons will not tolerate iodoform or any of the iodine compounds. In my experience I have met with two such cases. One was an amputation of the ear from epithelioma of the helix and the other was an abscess of the maxillary sinus (empyema of the antrum of Highmore). These were both elderly men, the former was aged seventy-three and the latter eighty-four. In these men acetanilid seemed to produce a deal of irritation and to delay granulation. I have had a similar experience several times with iodoform.

We use the powder very freely and in a large number of cases have not observed any toxic effects; Morton in a much larger series has noted toxic effects but twice. One case in an infant aged fourteen months, in whom excision of hip had been performed for tuberculosis and the wound packed with acetanilid; in four hours the temperature dropped five degrees; great pallor and feeble pulse. The temperature rose and symptoms disappeared upon withdrawal of the drug. The second case was one of extensive suppurative superficial scald. At twelve o'clock eight grammes of finely powdered acetanilid was dusted over the surface; at five P. M. the patient presented grave toxic symptoms; all acetanilid was at once removed, digitalis and whiskey were exhibited and by midnight he was in a normal condition.

Soper (*Medical World*, Vol. XIII, No. VI, 1895, p. 216), of the Sydenham Dispensary, New York, has used it with a very free hand and has observed no effect upon the temperature. He calls attention to the fact that it appears to do well up to a certain point, and then, as it were, to lose its grip, as he expressed it; he also states that the necessity of forcibly removing the crust and finding a collection of pus under it is unfavorable.

I have as already stated, observed the first condition as stated by Soper, but considered it due more to the advanced age of the subjects than to any want of response on the part of the drug. The latter condition I have never met with; when the crust was removed the granulating surface was always intensely dry as stated by Morton. In the cases in which the drug seemed to lose its grip this dryness persisted but the wound area did not decrease.

Harrell (*Medical News*, Oct., 1893); Hand (*Ibid*, Vol. LXIV, p. 269) and Knowles (*Ibid*, Vol. LXIV, p. 419), all speak in the strongest terms of the efficacy of the drug, the former states that the wounds heal quickly even after coal dust and other foreign matter had gained entrance.

It will be seen that the drug has a very wide application, and in most cases it will prove so satisfactory that it is difficult to restrain one's self from speaking too enthusiastically. It is, however, entirely safe to say that in acetanilid we have an addition to our surgical armamentarium which is quiet equal to and indeed superior to iodoform without its objectionable odor; that is no more dangerous than iodoform and that it may possess the ability to render the skin sterile preparatory to operative procedures. This, however, will require further study and microscopic investigation into the ability of acetanilid to destroy the staphylococcus epidermitis albus.

Since writing the above the recent laboratory work of Frothingham and Pratt (*Amer. Jour. Med. Sci.*, August, 1895,) upon the anti-bacterial action of acetanilid has come to my notice. These experiments show that the inhibitory action of acetanilid is much more marked in the one per cent. than in the five per cent. tubes. The growth of the bacillus pyocyaneus is much more affected by the presence of acetanilid than the other organisms.

The experimenters conclude as follows: Although acetanilid has not been very widely employed as a surgical dressing, in the cases where it has been used the results heve been so successful that its superiority over iodoform seems very probable, and its use instead of the latter indicated.

Laboratory experiments uphold the clinical proof of its value as a surgical dressing, aud the conclusions which the experiments teach are:

1. That acetanilid is probably to a very slight extent a germicide.

2. That acetanilid is decidedly an antiseptic.

[In this connection it is perhaps well to remember Sternberg's definition. "Antiseptics restrain the growth of micro-organisms which produce septic decomposition without destroying their vitality. Disinfectants destroy the germs of infectious diseases. Germicides are an extended term of the latter, agents that kill non-pathogenic bacteria as well as disease germs.]

3. That, as an antiseptic, acetanilid is far superior to iodoform, and that certainly from a laboratory, and probably also from a clinical, standpoint its substitution for the latter seems warranted.

Their experience is contrary to that of some other observers, in that they state that there is no danger of poisoning from the absorption of acetanilid.

Antipyrin in Diseases of Children.

At the French Congress of Internal Medicine recently held at Bordeaux, (*Sem. Med.*, August 17), Comby stated that antipyrin can be given to children as an antipyretic, an antispasmodic, an analgesic, and to check diarrhœa. The drug is well borne by children of all ages, and it can be given in large doses. Only once in hundreds of cases has Comby seen a slight fugitive erythema caused by the administration of antipyrin. It has never in his experience caused disorder of the stomach or intestine, vomiting or any ill effect on the kidney. In children suffering from febrile or spasmodic (chorea) diseases, antipyrin should not be given in fractional but in large doses to produce its full effect. According to the age af the patient 25 or 50 centigrammes, or 1 g., should be given at a time; this dose may be repeated two, three, five, and even six times a day. The same doses may be continued for weeks without ill effect. In chorea antipyrin as a rule diminishes the violence and disorderliness of the movements and shortens the duration of the disease. In whooping cough antipyrin has failed in the author's hands. In painful affections and in infantile hyperasthesia it is unreliable, but Comby admits that his experience on this point is not sufficient to base a final conclusion upon. In fevers antipyrin causes a notable reduction of temperature; it is one of the surest of antipyretics, and may be used without fear. When antipyrin in a sufficient dose does not lower the temperature it is a prognostic sign of ill omen.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

The Operative Treatment of Buboes.

Laub (*Internat. Klin. Randschau*) recommends the method of Lang, which consists in opening the gland at the point where fluctuation is most apparent, by the smallest possible incision, pressing out the pus, and injecting the cavity with 2 per cent. solution of nitrate of silver. The wound is then dressed with iodoform gauze. The injections are repeated so long as pus is formed. Healing commonly takes from one to two weeks, and the advantage of the method is found in the fact that almost no appreciable scar is left.

In the discussion, Hebra and Lang recommended this method in cases where the pus is situated centrally in a single mass; cases of disseminated suppuration demand rather radical extirpation. The success of Lang's method depends upon the disinfecting power of the silver nitrate and the albuminate and chloride of silver formed in the tissues.

Atropine in the Treatment of Gastric Hypersecretion.

Dr. V. Pugliese, of Bologna (*Medical Week*), has had occasion, in the treatment of four patients, to satisfy himself that atropine is an excellent remedy for correction of the hypersecretion of gastric juice, as Dr. Voinovitch stated in 1892. In all the four patients under Dr. Pugliese's care, hypodermic injections of atropine were invariably followed by considerable decrease of the quantity of hydrochloric acid in the gastric juice, as ascertained by chemical analysis. Unfortunately, two of the patients suffered from organic lesions of the stomach (enormous gastrectesis and cicatricial stricture of the pylorus) of such extent that the medical treatment was powerless to cure them. In the two others, however, in whom the structure of the stomach was not yet changed, all the morbid phenomena subsided completely under the influence of daily subcutaneous injections of neutral sulphate of atropine, continued from one to two months, in doses of one-half to one milligramme, combined with irrigations of the stomach and suitable diet.

Sleep for Children.

A German specialist says: "Nature has recently pleaded for giving children more sleep." A healthy infant sleeps most of the time during the first few weeks, and in the early years people are disposed to let children sleep as much as they will. But from 6 or 7 years old, when school begins, this sensible policy comes to an end, and sleep is put off persistantly through all the years up to manhood and womanhood. At the age of 10 or 11 the child is allowed to sleep only eight or nine hours, when its parents should insist on its having what it absolutely needs, which is ten or eleven at least. Up to 20 a youth needs nine hours sleep, and an adult should have eight. Insufficient sleep is one of the crying evils of the day. The want of proper rest and normal conditions of the nervous system, and especially the brain, produces a lamentable condition, deterioration in both body and mind, and exhaustion, excitability and intellectual disorders are gradually taking the place of the love of work, general well-being, and the spirit of initiative.—*N. Y. State Medical Reporter.*

The Preparation of Aseptic Catgut by Means of Formalin.

Cunningham (*N. Y. Med. Journal*), in a paper read before the Section in General Surgery, of the New York Academy of Medicine, advises the following method of preparing aseptic catgut. The catgut is soaked for two days in a mixture of absolute alcohol and ether. It is then placed for several days in a mixture of equal parts of formalin, alcohol, and distilled water. After this treatment the formalin is removed from the gut by boiling it for half an hour in a normal saline solution. It is then preserved in alcohol and is ready for use. For this method the author claims the following advantages: The gut is absolutely sterile, as formalin is an active germicide; the sutures are less quickly absorbed, since formalin unites with albumens to form fairly insoluble compounds; the catgut is not brittle, and may be boiled in normal saline solution without losing its strength.—*University Med. Magazine.*

Pregnancy and Dental Caries.

Dental caries is a disease characterized by molecular disintegration of the normal constituents of the teeth, and is probably more liable to occur during pregnancy; it is caused by the same processes which produce lactic acid, which latter in turn decalcifies the enamel and exposes the dentine. There is evidence to prove also that the saliva is more acid during the period of gestation than at other times; which, if true, is probably due to changes in the blood whereby its alkalinity is diminished. The analogy between this and the litæmic condition is striking.

It is improbable that lime salts are abstracted from the teeth to supply the needs of the growing fœtus; more than enough phosphates are ingested to supply the needs of both mother and child, hence maternal teeth do not suffer from lack of nutrition; again, during gestation osteophytes are found, evidencing an excess of lime salts in the system.

Vomiting of pregnancy, while it may be to some extent aid, cannot be considered a potent factor in the production of dental caries; neither can neglect of the teeth during pregnancy be proved to be more prevalent than at other times.—*Doctor Peterson.*

Treatment of Pulmonary Phthisis by Injections of Guaiacol.

M. Le Tannuer has employed subcutaneous injections of guaiacol in sterilized oil for about three years. His method differs from that of Professor Burlereaux only therein that he employs guaiacol instead of creosote, the former being the really active principle of the latter. His formula has been 5 centigrams of guaiacol and 1 centigram of iodoform to 1 cubic centimetre of sterilized oil. He begins by injecting 1 c. c. m. every two days, gradually increasing up to three or more every two days, according to the sensibility of the patient. He reports excellent results, the incipient cases all being cured and the more advanced partly cured and partly very much benefited and relieved of the annoying symptoms, as expectoration, cough and night sweats.—*Journal de Medicine de Paris.*

The Employment of Bicarbonate of Sodium in the Treatment of Gastric Dyspepsia.

Mathieu, after reviewing the various opinions of physicians as to the value of bicarbonate of sodium in the treatment of dyspepsia, arrives at the conclusion that this alkaline salt is equally serviceable in hyperchloracid acidity as in hypochloracid acidity. Its value depends upon the method of its administration. In hypochloracid acidity, doses of from 7 to 30 grains in the morning before breakfast augment secretion and increase the motor activity of the stomach. It is, however, of little utility in cases of pronounced dilatation.

For hyperchloracid acidity full doses of bicarbonate of sodium during digestion are necessary. *Revue Internationale de Medecine et de Chirurgie Pratiques.*

First Aid to Persons Injured by Electric Currents.

Professor Gariel, of the Paris Academy of Medicine, presented a committee report at a recent meeting of that body upon the means to be taken in treatment of persons coming in contact with electric wires or apparatus. The following are the conclusions:

When a person meets with an accident due to contact with electric conductors or generators, the contact must first be broken, if it still exists, as otherwise, those who come to render assistance may also become victims of the same accident.

The victim is to be carried to a well ventilated room, from which all persons, except, at the most, three or four assistants, are excluded.

The clothing should be loosened at once, and efforts are to be made at the earliest possible moment to re-establish respiration and circulation.

To restore respiration, recourse should be had mainly to the following two procedures: rhythmical traction on the tongue and artificial respiration, both must be continued for a sufficiently long time.

Lastly, concurrently with these procedures, the circulation should be stimulated by rubbing of the skin, flagellation of the trunk with the hand or wet towel, and any other means usually resorted to in such cases.—*Medico-Surgical Bulletin.*

Green Hair.

Greenish hair in men occupied in copper works and in copper mines is not unknown, for as far back as 1654 Bartholin drew attention to its occurrence. Since then several other observers have recorded instances of the same (*Ex.*) The most recent case is that of Dr. Oppenheimer's, who, at at a meeting of the Johns-Hopkins Hospital Medical Society, showed a specimen of green hair obtained from a patient who had been under his treatment. The man, at 58, had been a workman in copper works for four years, exposed to very fine copper oxide dust. He was not very cleanly in his habits, and he was suffering at the time of his visit from vague gastric symptoms. No pulmonary signs were detected. The hair was a pale but distinct green, this color being more marked on the head and the moustache. But, curiously enough, in the hair all over the body the same coloration was displayed. Copper was easily demonstrated chemically. Microscopically the hair was uniformly colored, no crystals being seen anywhere. The patient did not return after his first visit, and it was ascertained that he died two years later with a severe cough. The fact, however, is certain, that workers in copper works need not necessarily become affected with the poisonous metal, provided that scrupulous cleanliness be observed. The hair must be washed daily in a solution of soda, ordinary water being useless for the purpose. Experience shows that the part first to become affected is the moustache, and next the head; but if the latter be protected by a thick cap no coloration is produced. Unless care be taken as indicated, three or four days after starting work will be sufficient to cause the coloration to appear, and in summer time it is especially prone to occur, when perspiration is free. It is of some interest to note also that the underwear has a greenish tinge wherever it has been thoroughly soaked with sweat.

Cystitis Caused by the Use of Large Doses of Alkalies.

Alkalies used in gastric affections may be the cause of cystitis, says M. Mathew. In one case he saw on the second day of treatment vesical hematuria produced, the first time from 12 grammes of bicarbonate soda and 3 grains of magnesia given in several doses; and the second time by 4 grains magnesia and 6 grains prepared chalk. He thinks, therefore, that alkalies should be given with great care to persons having any bladder weakness. In any case if unfavorable bladder symptoms are observed, alkalies should be suspended at once. The amount should be regulated by the acidity of the urine.—*Rev. Therap.*

Auto-Infection from the Intestine.

Posner and A. Lewin (*Deutche Med. Woch.*, 1895, No. 7, p. 28), publish investigations regarding escape from the intestine, through slight changes in its lining, of intestinal bacteria, and the demonstration that these only cause peritonitis when conditions are favorable for their growth (*e. g.*, extravasation of blood) and that usually they are rapidly taken up from the peritoneum and distributed throughout the body. It was also found that the bacteria in the intestine may

extend by continuity or continguity to other structures and cause disease processes, as in cholangioitis, purulent hepatitis, etc. They refer to the finding by Sittmann of the *Bacillus coli communis* in the living blood in cases of general infection from the intestine; and report some experiments which demonstrate that the uninary tract may become infected by intestinal bacteria through the circulation, contrary to the teaching of Guyon in 1892. In their experiments it was found that in from eighteen to twenty-four hours after ligating the rectum of rabits the *Bacillus coli communis* was present in the peritoneum, heart-blood, kidneys, urine, etc. That the bacilli do not reach the kidney by first penetrating from the peritoneum directly to the bladder and then traveling upward, was shown by ligating one ureter and then causing an obstruction of the rectum; the colon bacillus appeared promptly in the kidney whose ureter had been ligated.

To what degree these results are to be applied to human pathology, is left to be decided in the future.

SURGERY.

The Treatment of Inoperable Cancers by the Interstitial Injection of Salicylic Acid.

Among the methods proposed for the treatment of inoperable cancers, this one proposed by Bernardt (*Cent. f. Gynaec*), has produced extraordinary results. Not only were the local symptoms (hemorrhages, sloughs, odors, pains, etc.) alleviated and sometimes dispersed, but the general condition of the patient showed marked improvement after a few days. These results led Tofius, of Moscow (*Rev. Med. de Moscow*), to apply these interstitial injections in seven of his cases, with results which he considers far superior to any other method of inoperative treatment. The injections of salicylic acid produce a rapid diminution in the amount of hemorrhage, and sometimes its complete cessation, and also of the sloughing, lessening the pain, and producing a gain in the general condition of the patient, and finally a retarding in the progress of the disease. These results were obtained by the injection every four or five days, after careful antisepsis, of 1 to 4 cubic centimetres (15 minims to 1 drachm) of a six-percent. alcoholic solution of salicylic acid, repeated seven to thirteen times.—*Lyon Med.*

Treatment of Gall-Stones and Gall-Stone Colic.

Ferguson (*Journal of the American Medical Association*), gives the following indications for opening the abdomen and exploring the gall-bladder.

1. For attacks of biliary colic accompanied by distended gall-bladder which suddenly subside and no stone is passed. The stone has dropped into the bladder and will attempt its escape again.

2. For repeated attacks of biliary colic where the bladder becomes enlarged and jaundice follows. A stone is lodged in the ducts, and must be removed to obtain relief.

3. For persistent tenderness over the gall-bladder. The interpretation of this sign is that a subacute inflammation has been set up by the irritation of a stone. Such cases have a history of colic, and the results are apt to be gangrene of the gall-bladder, ulceration, (with perforation, causing peritonitis), or cancer.

4. For persistent and marked enlargement. Such may indicate that the gall-bladder contains: a large number of stones or several very large ones; much mucus; large accumulations of bile: mixture of the two above; that a growth, cancer, or tumor is invading its walls. Three operations are open to us, and each should be undertaken according to its own nature.

1. Cholecystectomy: cutting open the gall-bladder and removing the stones from bladder and ducts and closing again, with or without a period of drainage.

2. Cholecystotomy: removal of the gall-bladder entire with its ducts and contents, advisable only in cases of tumor, cancer, ulceration, or gangrene.

3. Anastomosis of the gall-bladder with the intestines.

This is to be done when the gall bladder contains much material, including bile, and after evacution an opening cannot be established between the gall-bladder and the intestine,—*i. e.*, permanent obstruction of common ducts. It is easiest accomplished by means of the Murphy button.

Herpes Zoster Caused by Mental Disturbance.

In the *Lancet* Dr. Antony Roche reports the following case: "There are few diseases more interesting from a physiological point of view than herpes zoster—the common shingles. Looking over my notebook I have been struck with the frequency of its occurrence after some cause producing mental depression or anger. I find this has been noticed by others." Bateman says: "Like erysipelas, it has been ascribed by some authors to paroxysms of anger." Schwartz saw three cases which followed violent fits of passion. I have noted the following cases:

1. A woman suddenly received the news that her husband had been ordered to India. The next morning the herpes was noticed on her left side.

2. An old man learned that a firm in which he was interested had failed. That evening the spots appeared on his left side.

3. A woman was much distressed at the sudden illness of her son. On the following morning the herpes had appeared.

4. A child six years of age, of remarkably equable temperament, was disobedient and sent to bed. She cried very much and the next morning the herpes was noticed on her left side.

5. Recently a woman consulted me whose only son was shortly to be married. She complained of pain in her left side and a rash, which was that of herpes. She herself ascribed the rash to the grief at the parting from her son. I do not know whether it would be right to say *post hoc ergo propter hoc* in all these cases, but I do not think it would be unreasonable. There are many examples of mental disturbance producing sudden tropic changes.—*J. M. M., in American Journal of Commerce.*

The Effects of Unilateral Castration Upon the Prostate.

Dr. E. Hurry Fenwick (*British Medical Journal*), excerpts from his notebooks some twenty cases which may be grouped, according to the issues which have been raised, under the hands of unilateral castration, monorchids, and atrophic testes of minute size (small bean to pea size). He endorses Dr. White's statement with regard to the shrinkage of the prostate after bilateral castration. These cases are taken consecutively and are not selected :

1. Left testis removed for tuberculosis in 1889. Prostate examined in 1890 : left lobe equal to right, both healthy, neither atrophic.
2. Left testis removed in 1863. Examined in 1889 : left lobe of prostate larger than right.
3. Left testis ablated in 1887. Examined in 1894 : very little prostate felt, and what was detected of it was confused ; no interlocular furrow appreciable.
4. Left testis absent ; left lobe of prostate flat, slightly larger than right.
5. Left testis absent ; left lobe of prostate atrophied, right lobe normal.
6. Left testis minute ; both lobes of prostate equal, but flattened.
7. Left testis minute ; left lobe of prostate large, right lobe atrophic.
8. Right testis minute ; right lobe of prostate inflamed and cirrhotic, left lobe small.
9. Left testis very small ; left lobe of prostate larger than right.
10. Right testis pea-sized ; left lobe of prostate very small, half the size of right.
11. Left testis minute ; both lobes of prostate equal, smooth and plump.

In cases 6 to 11, inclusive, atrophy followed acute inflammation. No cause of atrophy is assigned in cases 12 to 20.

12. Left testis very small ; both lobes of prostate equal.
13. Right testis atrophic ; lobes of prostate equal, flattened and cupped.
14. Left testis small ; prostate of average size, left lobe slightly the larger.
15. Left testis cannot be felt; prostate equal-lobed.
16. Left testis small ; left lobe of prostate smaller than right.
17. Left testis small ; prostate lobes of equal size, but flattened.
18. Both testes retained in groin and very small ; both lobes of prostate equal ; became affected by infiltrating primary carcinoma.
19. Both testes in groin bean-sized ; both lobes of prostate equal, but small.
20. This case is interesting ; left testis in groin very small ; patient suddenly affected with gonorrhœal parenchymatous prostatitis ; both lobes were found equal and greatly enlarged.

A Successful Operation of Purulent Pericarditis.

Surgical intervention in pericarditis is so rare as to render the case operated by Eiselberg, and reported in the *Wiener klin Woch.*, of especial interest. The case was that of a boy of seventeen who developed a purulent pericarditis after a stab wound of the pericardium. Puncture of the pericardium having been performed several times without relief, the surgeon decided upon incision. The cartilage of the fourth rib on the left was resected, and the thickened pericardium exposed. After exploratory puncture it was opened by a transverse incision four centimetres in length, and two litres of a sero-purulent fluid were evacuated. The cavity was washed out with warm salicylated water, the borders of the pericardial incision stitched to those of the wound, and two drainage-tubes inserted. Complete recovery took place in four weeks. Examination of the exudate showed the presence of an organism resembling the colon bacillus, but it was of course impossible to say whether its presence was primary or the infection took place through the wound. The writer insists upon the importance of suturing the pericardium to the lips of the wound, the advantages of which procedure in preventing infection of the pleura are evident.—*Boston Med. and Surg. Jour.*

Surgery of the Maxillary Sinus, and Its Progress During the Past Ten Years.

Since rhinoscopy has made the antrum directly accessible through the nasal cavity the pathology of the sinus has been radically changed ; not merely transformed, but enlarged to unforeseen limits ; a host of rhinorrheas, which were formerly regarded as chronic coryzas, are now traced to their true origin within the sinus. An entirely modern form of intra-maxillary abscess has been created, one which is recognized and characterized by the presence of pus in the nasal fossæ.

Although for many years the empyema of the antrum of Highmore has been recognized, the difference between the two is one of degree and not of kind, and the symptoms of the milder form may merge rapidly into those of the classical disease under the existence of certain conditions. The two names, "open empyema" and "closed empyema," are now commonly used to express the difference between the two.

Before the use of the rhinoscopic mirror the diagnosis was based upon the external symptoms alone, but now the suppurative process within the cavity are found to be much more common than was once believed.

The modern form of maxillary abscess is much more difficult to recognize. Its diagnosis does not rest upon one symptom alone—nasal suppuration. Unilaterality, intermittence, fetor are helps, but are untrustworthy ; pus must actually be discovered within the antrum. This may be done, after the method of Heryng, by transillumination, or by catheterization of the natural outlet or exploratory puncture, lavage or aspiration.

As the innumerable variety of operative proceedings for the relief of the old form of Highmore's empyema liternally did not leave a place for a new operation, the treatment of suppuration within the antrum has not made the progress which pathogenesis and diagnosis have. When the operator is thoroughly familiar with intranasal technique. lavage through the natural meatus is probably to be preferred. When trephining must be done the alveolus of a molar tooth is the better site. The opening through the canine fossa should be reserved to use in cases which require tamponnade and curetting.—*Annals of Surgery.*